

# LBT-N650AV

## SERVICE MANUAL

*AEP Model  
E Model  
Australian Model*

- LBT-N650AV is composed of following models.  
As for the service manual, it is issued for each component model,  
then, please refer to it.

### COMPONENT MODEL NAME FOR LBT-N650AV

Tuner, Preamplifier	STR-N600
Power Amplifier	TAN-N600
Cassette Deck	TC-N500
Compact Disc Player	CDP-N550C
Digital Surround Processor	SDP-N600

### PARTS LIST

#### NOTE :

- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Abbreviation AUS : Australian

<u>Part No.</u>	<u>Description</u>	<u>Part No.</u>	<u>Description</u>
1-467-998-11	COMMANDER, STANDARD (RM-S600L)	3-798-980-11	MANUAL, INSTRUCTION (ENGLISH, SPANISH) (E, AUS)
1-501-374-11	ANTENNA, LOOP	3-800-830-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH) (AEP)
1-501-659-41	ANTENNA (FM) (E, AUS)	4-937-945-01	PLATE (TRANSPORT), LOCK
1-501-804-11	ANTENNA (FM) (AEP)	* 4-975-529-01	INDIVIDUAL CARTON (E)
1-769-392-11	CORD (WITH CONNECTOR) (16P - 16P) (STR-TAN)	* 4-975-530-01	INDIVIDUAL CARTON (AUS)
1-769-393-11	CORD (WITH CONNECTOR) (17P - 17P) (STR-TC-CDP)	* 4-973-307-01	CUSHION (UPPER) (STR/SDP)
1-769-394-11	CORD (WITH CONNECTOR) (5P - 5P) (TAN-SDP)	* 4-973-650-01	CUSHION (LOWER) (STR/SDP)
1-769-395-11	CORD (WITH CONNECTOR) (9P - 9P) (STR-SDP)	* 4-973-916-01	CUSHION (FRONT) (CDP)
3-707-584-21	COVER, BATTERY (for RM-S600L)	* 4-973-917-01	CUSHION (REAR) (CDP)
3-798-422-41	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE) (AEP)	* 4-978-209-01	INDIVIDUAL CARTON (AEP)

## COMPACT Hi-Fi STEREO SYSTEM

# SONY®

Sony Corporation  
Consumer A&V Products Company  
Home A&V Products Div.

9-960-269-12

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95104066-1D  
Printed in Japan  
© 1995.9

Published by Home A&V Products Div. Quality Engineering Dept.

# STR-N500/N600

## SERVICE MANUAL



Photo: STR-N600

*AEP Model*  
*UK Model*  
*E Model*  
*Australian Model*  
*STR-N500/N600*  
*PX Model*  
*STR-N500*

STR-N500/N600 are tuner and amplifier section in LBT-N500, LBT-N550, LBT-N550P, LBT-N600AV and LBT-N650AV.

### SPECIFICATIONS

System FM stereo  
FM/AM superheterodyne tuner

#### **FM tuner section**

Tuning range 87.5 - 108.0 MHz  
Aerial 75 ohms unbalanced  
Intermediate frequency 10.7 MHz

#### **AM tuner section**

Tuning range  
Latin American models:  
AM: 530 - 1,710 kHz  
German and Italian models:  
AM: 531 - 1,602 kHz  
Other European models:  
MW: 531 - 1,602 kHz  
LW: 153 - 279 kHz  
Other models:  
AM: 531 - 1,602 kHz

Aerial AM loop aerial  
External aerial terminals  
Intermediate frequency 450 kHz

Input	Jack type
AUX	Phono
PHONO (MM)	Phono

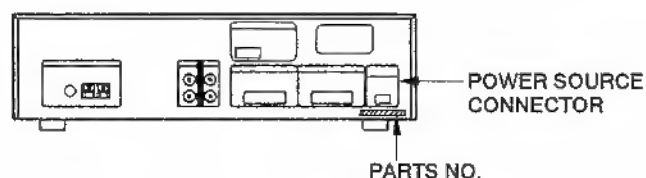
Input	Sensitivity	Impedance
AUX	245 mV	47 kilohms
PHONO (MM)	3.3 mV	47 kilohms

Weight Approx. 2.6 kg

Dimensions  
Approx. 355 x 105 x 315 mm  
(w/h/d, including projections)

FM-AM TUNER/PRE-AMPLIFIER  
**SONY®**

# **MODEL IDENTIFICATION** **— BACK PANEL —**





	PARTS NO.	NOTE
N500: UK Model	4-969-784-0□	With power source connector for PS-LX56P
N500: AEP, German, Italian Model	4-969-784-1□	
N500: East European, CIS Model	4-969-784-2□	
N500: E Model	4-970-163-0□	With power source connector for PS-LX56P
N500: Mexican, Australian, PX Model	4-970-163-1□	
N500: Argentine Model	4-970-163-4□	
N500: AEP 2 Model	4-973-530-0□	AEP model with power source connector for PS-LX56P
N600: AEP, UK, German, Italian Model	4-969-784-4□	
N600: East European, CIS Model	4-969-784-5□	
N600: E Model	4-970-163-5□	
N600: Australian Model	4-970-163-6□	

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## **SAFETY-RELATED COMPONENT WARNING!!**

COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

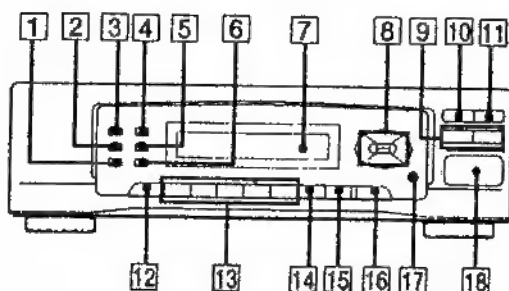
## SECTION 1 GENERAL

This section is extracted from instruction manual.

### 1-1. INDEX TO PARTS AND CONTROLS

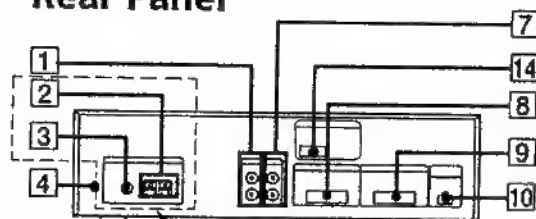
#### Front Panel

##### Tuner / Preamplifier (STR-N500/N600)

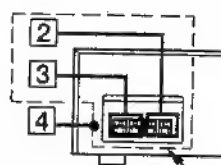


- 1 PTY button (\*)
  - 2 DAILY button
  - 3 CLOCK SET button
  - 4 TIMER SET button
  - 5 REC button
  - 6 EON button (\*)
  - 7 Display window
  - 8 CURSOR CONTROL keys
  - 9 TUNING (+/-) buttons
  - 10 TUNING MODE button
  - 11 TUNING MEMORY button
  - 12 P.FILE button
  - 13 SELECT 5/PERSONAL FILE buttons
  - 14 EQ MEMORY button
  - 15 CHARACTER button
  - 16 ENTER/NEXT button
  - 17 DISPLAY button
  - 18 TUNER/BAND button
- \*: AEP, UK, German, Italian, East European ONLY.

#### Rear Panel



AEP, AEP2, UK, German, Italian, East European, CIS model



E, Australian, Argentine, Mexican, PX model

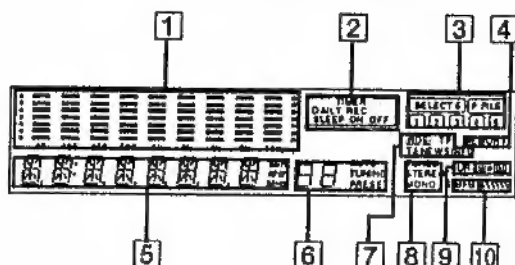
- 1 PHONO IN jacks
- 2 AM terminal
- 3 FM 75Ω terminal
- 4  $\varnothing$  ground terminal
- 7 AUX IN jacks
- 8 SYSTEM CONTROL 1 terminals
- 9 SYSTEM CONTROL 2 terminals
- 10 POWER SOURCE terminal (only for the model supplied with a turntable) (N500: AEP2, UK, E ONLY)
- 14 SYSTEM CONTROL 3 terminals (N600 ONLY)

\*AEP: AEP model without power source for PS-LX56P.

AEP2: AEP model with power source for PS-LX56P.

#### Display Window

##### Tuner / Preamplifier (STR-N500/N600)



- 1 Spectrum analyser
- 2 TIMER DAILY/REC/SLEEP/ON/OFF indications
- 3 SELECT 5/P.FILE indications
- 4 MEMORY indication
- 5 Frequency/Station name/Function indications
- 6 AUTO/TUNING/PRESET indications
- 7 RDS indications
- 8 Tuner indications
- 9 SURROUND indication
- 10 DBFB indication

## SECTION 2

### ELECTRICAL ADJUSTMENTS

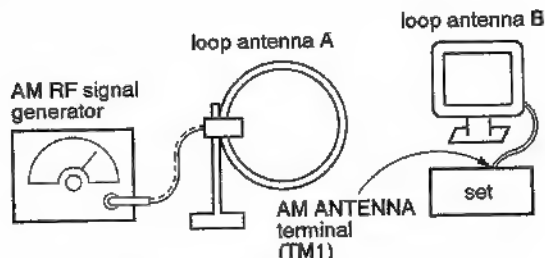
**Note:** As a front-end (FE1) is difficult to repair if faulty, replace it with new one.

The FM TUNED level must be adjusted after the AM TUNED level adjustment has completed.

0 dB = 1  $\mu$ V

#### AM Section Adjustment

**Setting:**



Carrier frequency: 999 kHz (except E model)  
: 1,000 kHz (E model)  
Modulation: 400 Hz, 30% modulation

#### AM tuned Level Adjustment

Band: AM

##### Procedure:

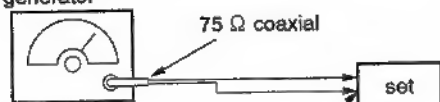
1. Set loop antenna A so that the loop antenna B input level becomes 316  $\mu$ V (50 dB  $\mu$ ).
2. Tune the set to 999 kHz (except E model) or 1,000 kHz (E model).
3. Adjust RV1 so that the TUNED indicator goes on.

**Adjustment Location:** main board

#### FM Section Adjustment

**Setting:**

FM RF stereo signal generator



Carrier frequency: 98 MHz  
Modulation: 1 kHz, 75 kHz deviation

FM ANTENNA terminal (TM1)

#### FM Tuned Level Adjustment

Band: FM

##### Procedure:

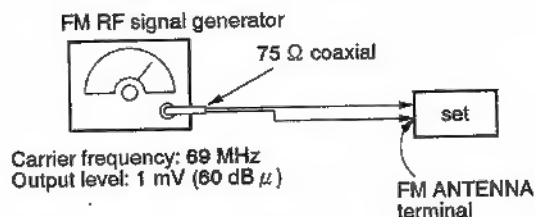
1. Supply a 17.8  $\mu$ V (25 dB  $\mu$ ) 98 MHz signal from the ANTENNA terminal.
2. Tune the set to 98 MHz.
3. Adjust RV2 so that the TUNED indicator goes on.

**Adjustment Location:** main board

#### FM POLAR Adjustment

**Setting:**

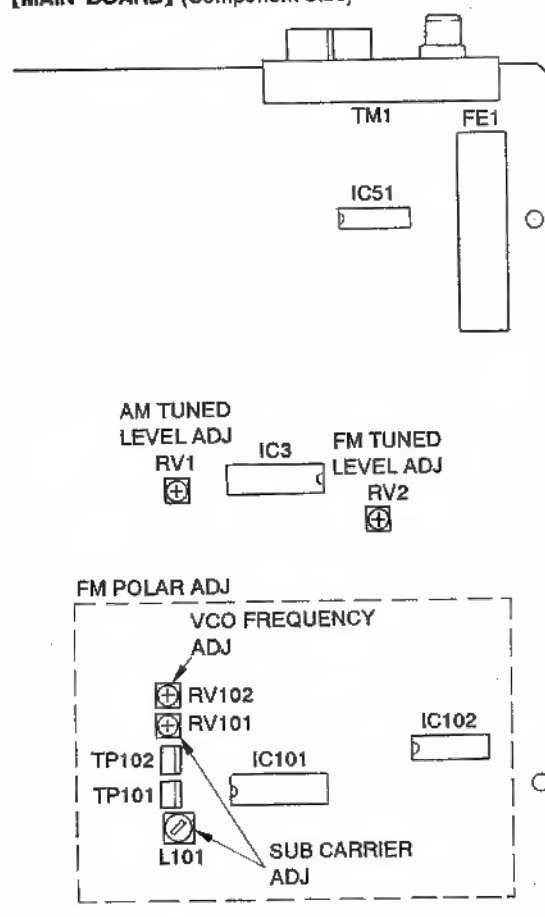
Band: FM



1. Connect the frequency counter to the TP102 and adjust the RV102 for a frequency of 31.25 kHz  $\pm$  50 Hz.
2. Connect the VTVM to the TP101, receive the signal of 69 MHz  $\pm$  1 kHz (1 kHz dev.) and adjust the reading of the VTVM to 0 dB.
3. Set the modulation frequency of the FM RF signal generator to 31.25 kHz (10 kHz dev.) and adjust the L101 so that the reading of the VTVM is 0 dB.
4. Adjust the RV101 so that the reading of the VTVM to 14 dB.
5. Check that the separation between Pins ④ and ⑫ of the IC102 is more than 18 dB.

**Adjustment Location:** main board

**[MAIN BOARD]** (Component Side)



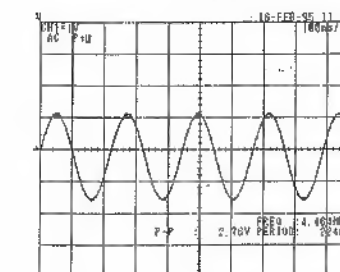
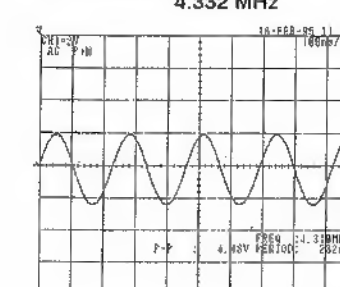




3-1. SCHEMATIC DIAGRAM – TUNER SECTION – • EXCEPT CIS model







① IC51 ① 2.8 Vp-p  
4.5 MHz

② IC202 ⑬ 4.5 Vp-p  
1.000 MHz

**NOTE**

- All capacitors are in  $\mu\text{F}$  unless otherwise noted, pF:  $\mu\text{F}$ : 50W or less are not indicated except for electrolytics and tantalums.

- All resistors are in  $\Omega$  and  $1/4W$  or less unless otherwise specified.

- $\Delta$  : internal component.
-  : panel designation.
-  : B+ Line.
-  : B- Line.
-  : adjustment for repair.

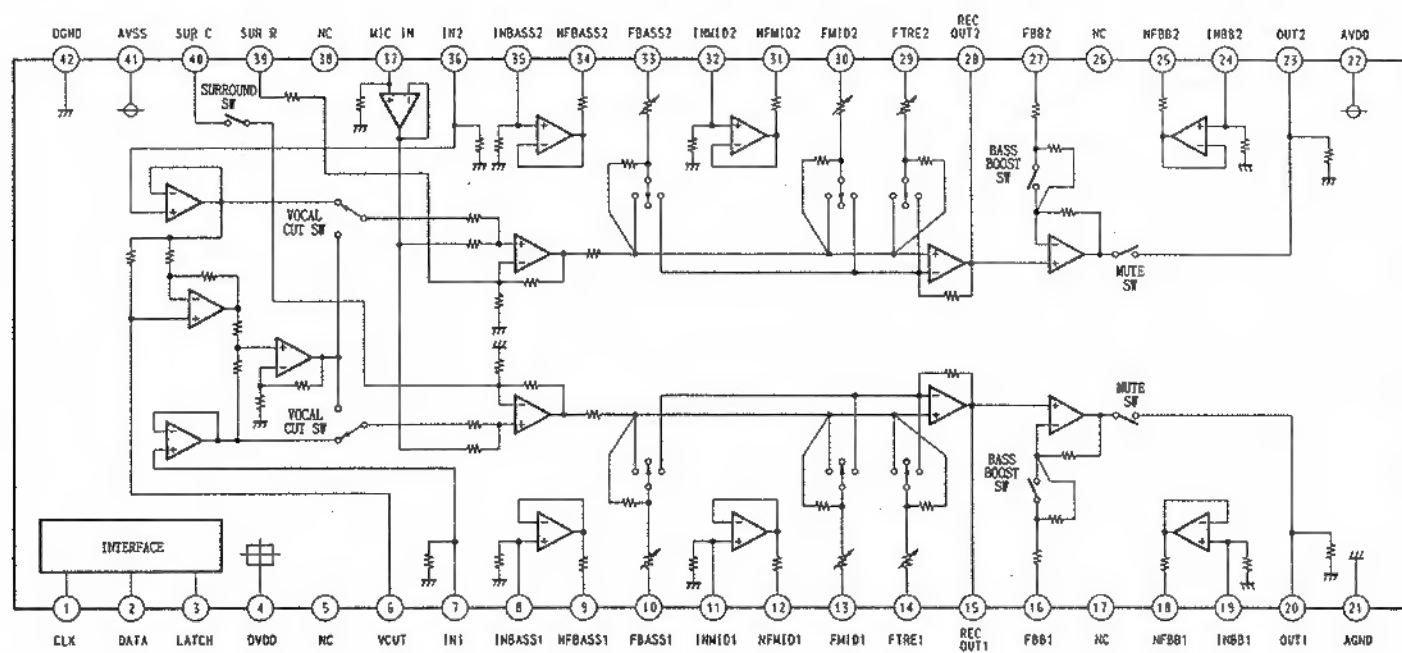
- Voltages and waveforms are dc with respect to ground under no-signal conditions.  
no mark: FM ( ): AM or MW ( ): LW
- \* : can not be measured.

- Voltages are taken with a VOM (Input impedance 10M $\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.

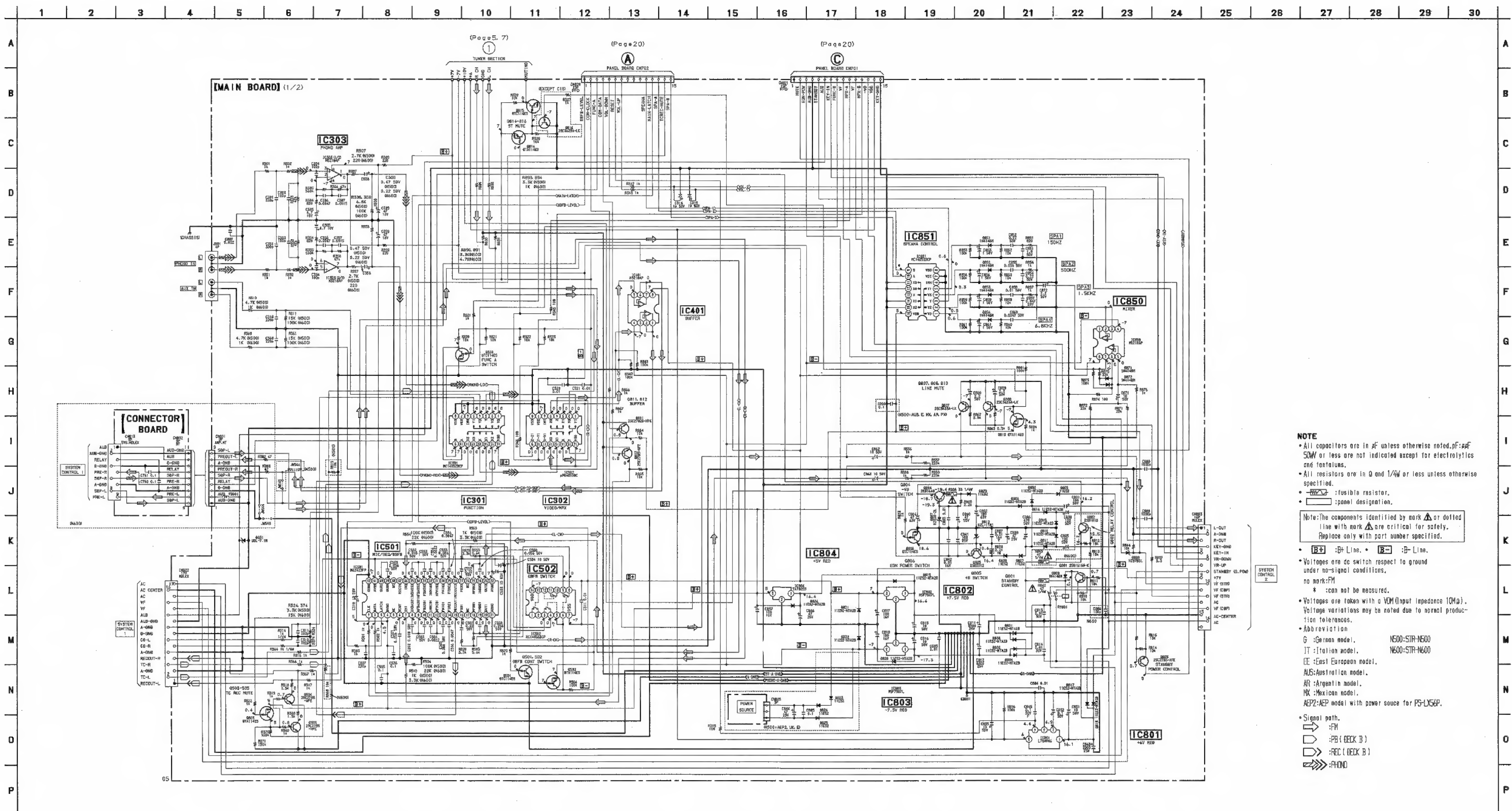
- \*Circled numbers refer to waveforms.

- Abbreviation
 

G :German model.	MX :Mexican model.
IT :Italian model.	AR :Argentin model.
EE :East European model.	AE2: AEP model with power source for
AUS: Australian model.	PS-LX5P.
N500:STR-N500	

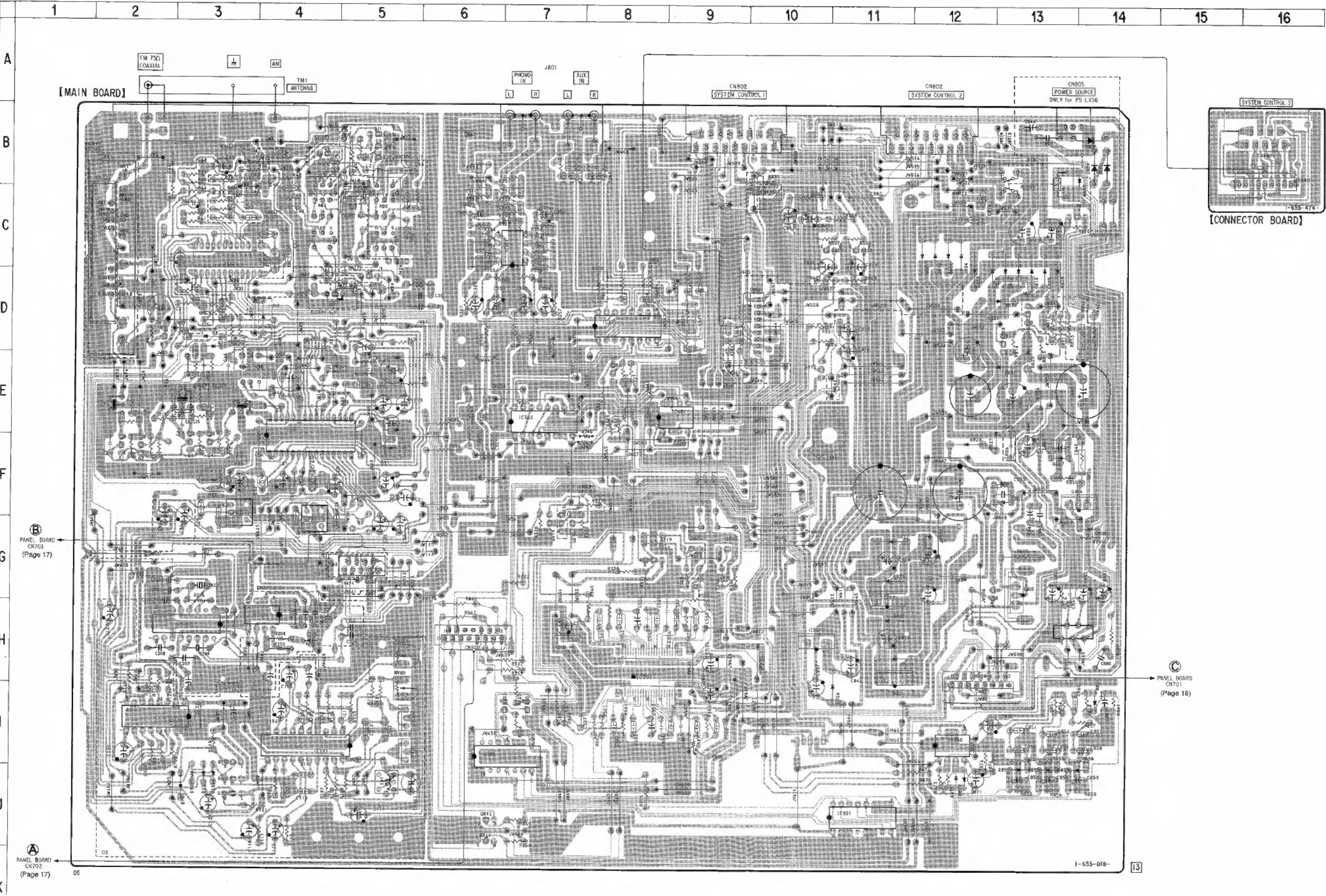


### 3-2. SCHEMATIC DIAGRAM -- MAIN SECTION --

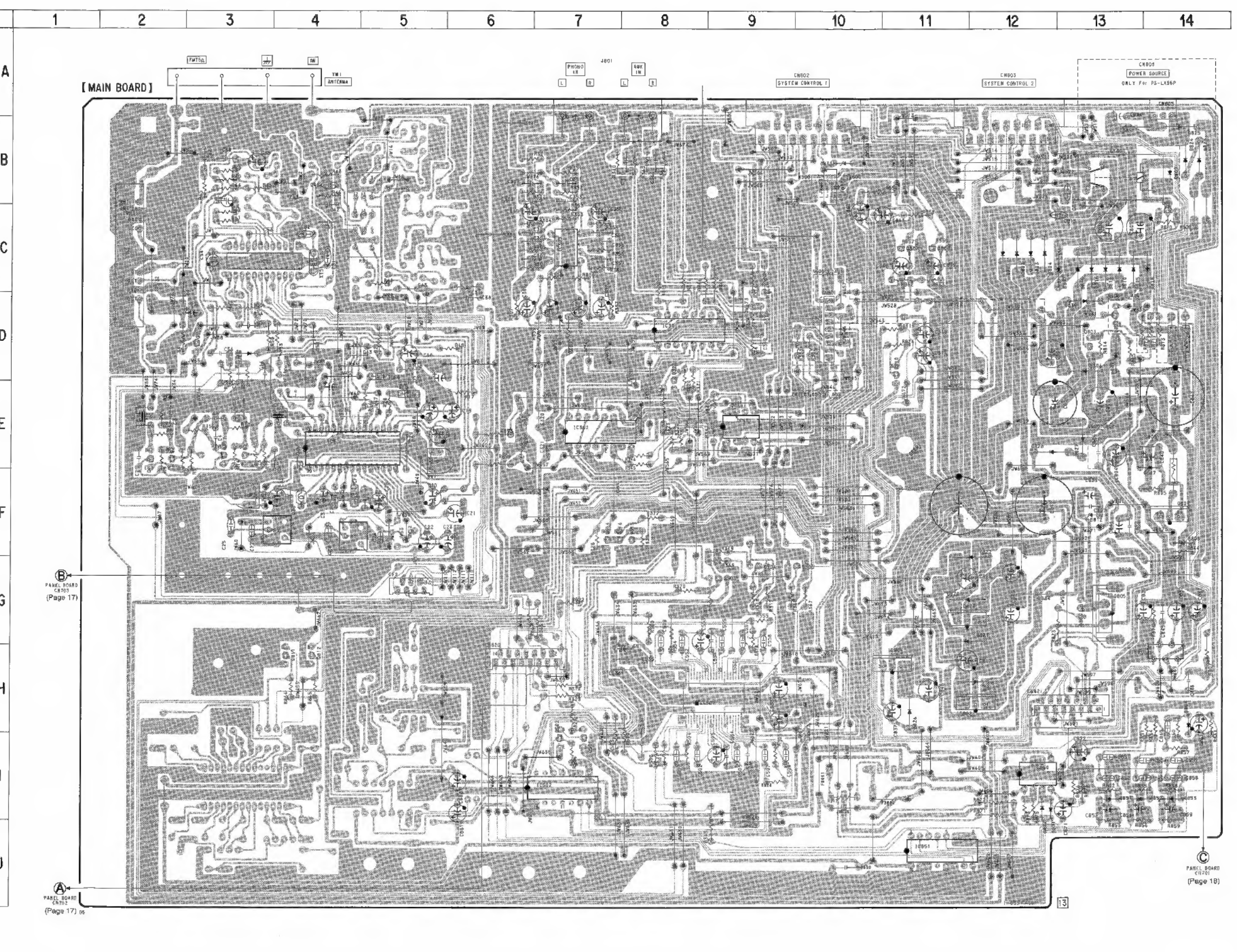




3-3. PRINTED WIRING BOARDS - TUNER, MAIN SECTION -  
• AEP, AEP2, UK, German, Italian, East European, CIS model (TYPE A)



• E, Australian, Mexican, PX, Argentine model (TYPE B)



• Semiconductor Location

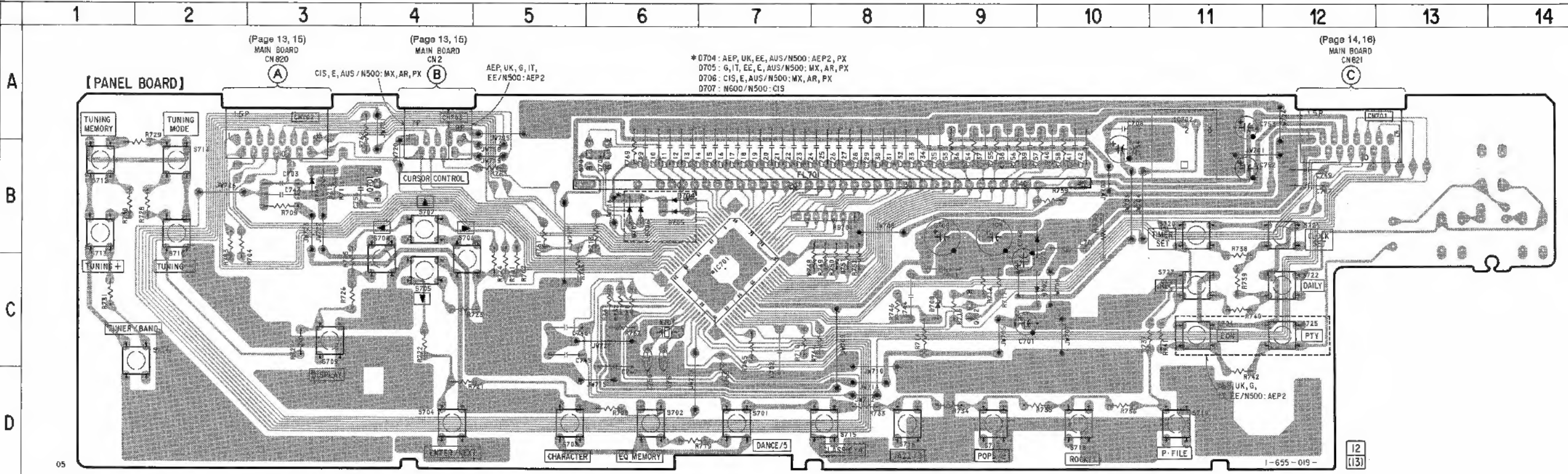
Ref. No.	Location	Ref. No.	Location
D1	D-3	IC302	E-7
D2	D-4 (TYPE A)	IC303	C-7
D3	D-3 (TYPE A)	IC401	E-9
D101	I-3 (TYPE A)	IC501	H-8
D103	I-3 (TYPE A)	IC502	I-6
D104	I-3 (TYPE A)	IC801	H-14
D105	I-3 (TYPE A)	IC802	H-11
D801	C-12	IC803	G-11
D802	C-12	IC804	H-10 (TYPE A)
D803	C-12	IC804	H-11 (TYPE B)
D804	C-12	IC850	I-12
D805	C-13	IC851	J-11
D806	D-13		
D807	E-13	Q1	E-2
D808	F-14	Q2	E-2
D809	B-14	Q3	E-3 (TYPE A)
D810	C-13	Q4	E-3 (TYPE A)
D811	F-13	Q5	D-2 (TYPE A)
D812	F-13	Q6	D-3 (TYPE B)
D815	C-12 (TYPE A)	Q7	C-5 (TYPE A)
D816	C-13 (TYPE B)	Q8	D-4 (TYPE A)
D817	C-13 (TYPE A)	Q9	B-5 (TYPE A)
D818	C-13 (TYPE B)	Q10	B-4 (TYPE A)
D819	C-14 (TYPE B)	Q11	B-5 (TYPE A)
D820	H-11	Q12	B-5 (TYPE A)
D821	G-11	Q13	I-3 (TYPE A)
D822	F-11 (TYPE A)	Q14	I-3 (TYPE A)
D823	F-12 (TYPE B)	Q15	D-8
D824	B-14	Q16	H-7
D825	B-14	Q17	H-7
D826	H-11	Q18	G-9
D827	E-13	Q19	G-9
D828	D-13	Q20	C-14
D829	D-13	Q21	D-13
D830	D-13	Q22	D-13
D831	B-10	Q23	F-14
D851	I-13	Q24	G-13
D852	I-13	Q25	G-13
D853	I-14	Q26	C-10 (TYPE A)
D854	H-14	Q27	C-11 (TYPE B)
D872	I-12	Q28	C-11
IC3	E-4	Q29	D-10
IC51	C-3	Q30	J-6 (TYPE A)
IC101	I-4 (TYPE A)	Q31	H-4 (TYPE B)
IC102	I-2	Q32	J-6 (TYPE A)
IC201	G-3 (TYPE A)	Q33	H-4 (TYPE B)
IC202	G-2	Q34	F-7
IC301	D-8	Q35	F-7 (TYPE A)
		Q36	F-8 (TYPE B)
		Q37	F-7

Note:

- : parts extracted from the component side.
- : parts mounted on the conductor side.
- : Pattern from the side which enables seeing.
- Abbreviation
  - G : German
  - IT : Italian
  - AUS : Australian
  - EE : East European
  - MX : Mexican
  - AR : Argentine
  - AEP2 : AEP model with power source for PS-LX56P.
  - N500 : STR-N500
  - N600 : STR-N600



3-4. PRINTED WIRING BOARD - PANEL SECTION -



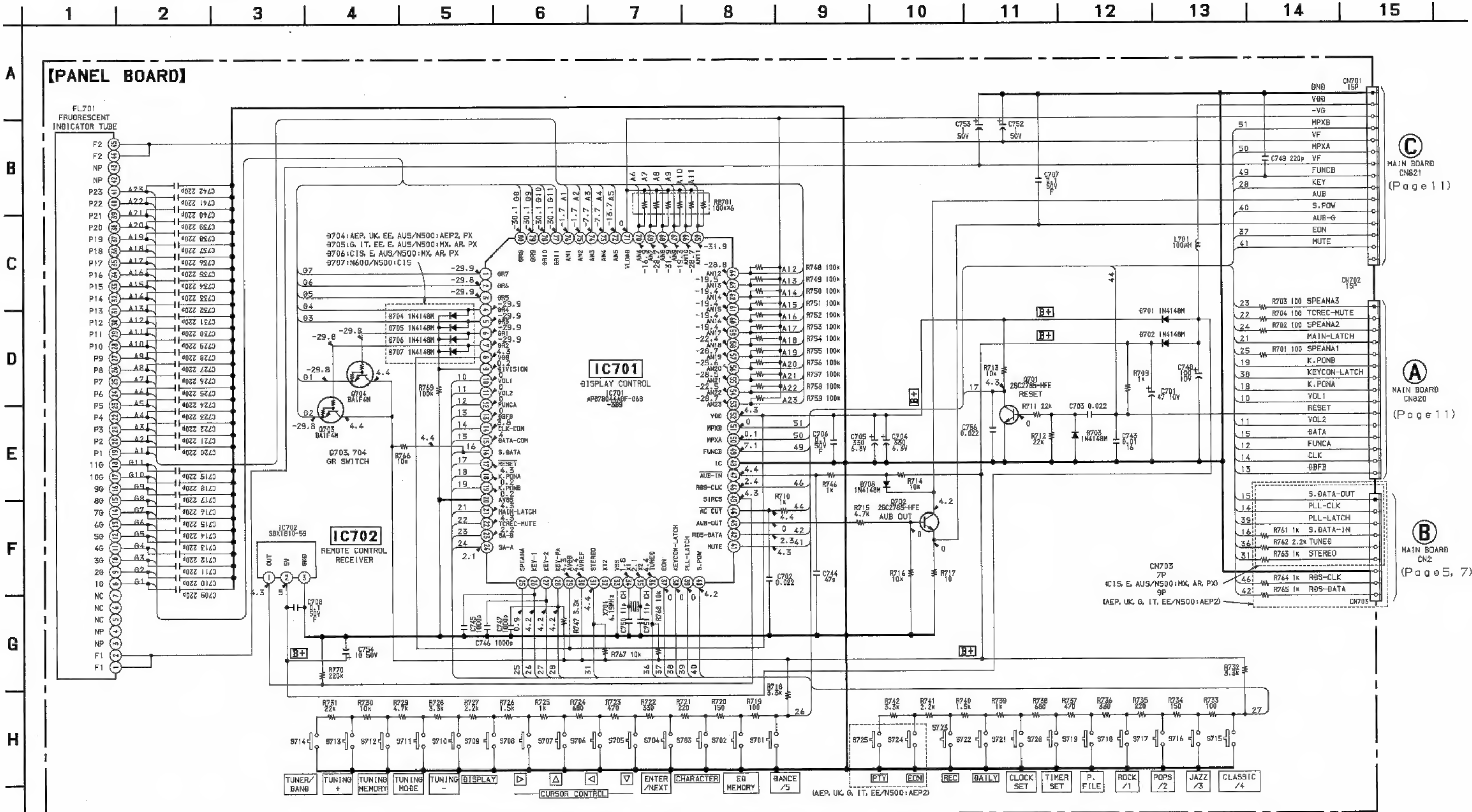
• Semiconductor Location

Ref. No.	Location
D701	B-10
D702	B-10
D703	B-6
D704	B-6
D705	B-6
D706	B-6
D707	B-6
D708	C-9
IC701	C-7
IC702	A-11
Q701	B-4
Q702	C-9
Q703	B-6
Q704	B-6

Note:

- : parts extracted from the component side.
- : parts mounted on the conductor side.
- ▨ : Pattern from the side which enables seeing.
- Abbreviation
- G : German
- IT : Italian
- AUS : Australian
- EE : East European
- MX : Mexican
- AR : Argentine
- AEP2 : AEP model with power source for PS-LX56P.
- N500 : STR-N500
- N600 : STR-N600

3-5. SCHEMATIC DIAGRAM - PANEL SECTION -



NOTE

- All capacitors are in  $\mu F$  unless otherwise noted.  $\mu F$ :  $\mu F$  50W or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $1/4W$  or less unless otherwise specified.
- Panel designation.

- B+ : B+ Line.
- Voltages are dc with respect to ground under no-signal conditions.
- Voltages are taken with a VOM (Input impedance 10M $\Omega$ ). Voltage variations may be noted due to normal production tolerances.

Abbreviation

G : German model. N500:STR-N500  
IT : Italian model. N600:STR-N600  
EE : East European model.  
AUS: Australian model.  
MX: Mexican model  
AR: Argentine model.  
AEP2: AEP model with power source for PS-LX56P

### 3-6. IC PIN FUNCTION DESCRIPTION

#### DISPLAY BOARD IC701 $\mu$ PD78044AGF-068-3B9 (DISPLAY CONTROL)

Pin No.	Pin Name	I/O	Function
1-5	GR7-GR3	O	FL grid signal output.
6, 7	GR1, 2	O	
8	VDD	—	Power supply. (+B)
9	DIVISION	I	Division select input.
10	VOL 1	O	Volume encoder signal output.
11	VOL 2	O	
12	FUNCA	O	Input selector control signal output.
13	DBFB	O	DBFB switching signal output.
14	CLK-COM	O	Serial clock output. (LC72130, M62423)
15	DATA-COM	O	Serial data output. (LC72130, M62423)
16	S. DATA	I	Serial data input. (LC72130)
17	RESET	I	Reset signal input.
18	K. PONA	O	Not used.
19	K. PONB	O	
20	AVSS	—	Power supply. (GND)
21	MAIN-LATCH	O	Serial latch output. (M62423)
22	TCREC-MUTE	O	Mute signal for TC REC.
23	SA-B	O	Not used.
24	SA-A	O	
25	SPEANA	I	Control signal input for spectram analyzer.
26, 27	KEY-1, 2	I	Key matrix input.
28	KEY-PA	I	Key matrix input.
29	AVDD	—	Power supply. (GND)
30	AVREF	—	A/D converter. Reference terminal.
31	STEREO	I	Stereo detection signal from tuner.
32	XT2	—	Not used.
33	VSS	—	Power supply. (GND)
34	X1	—	X'tal (4.19 MHz)
35	X2	—	
36	TUNED	I	Tuned detection signal from tuner.
37	EON	O	Tuner block power control output.
38	KEYCON-LATCH	O	Latch signal for M65840.
39	PLL-LATCH	O	Latch signal for LC72130.
40	S. POW	O	System power on signal output.



Pin No.	Pin Name	I/O	Function
41	MUTE	O	Mute signal for AMP.
42	RDS-DATA	I	RDS data input. (SAA6579T)
43	AUB-OUT	O	AUBUS output.
44	$\overline{\text{AC CUT}}$	I	Power detect input terminal.
45	SIRCS	I	SIRCS signal input.
46	RDS-CLK	I	RDS clock input. (SAA6579T)
47	$\overline{\text{AUB-IN}}$	I	AUBUS input.
48	IC	—	(Connect to GND.)
49	FUNCB	O	Input selector control signal output.
50, 51	MPXA/B	O	Control signal output for MPX.
52	VDD	—	Power supply. (+B)
53-70	AN23-6	O	FL segment signal output.
71	VLOAD	—	Driving power for FL display panel.
72-76	AN5-1	O	FL segment signal output.
77-80	GR11-8	O	FL grid signal output.

### EXPLODED VIEW



NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts  
Example:  
KNOB, BALANCE (WHITE) . . . (RED)  

↑  
Parts Color

↑  
Cabinet's Color

- Items marked “\*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of the electrical parts list.

The components identified by mark  or dotted line with mark  are critical for safety.  
Replace only with part number specified.

- ## ● Abbreviations

IT: Italian

G: German

EE:East European

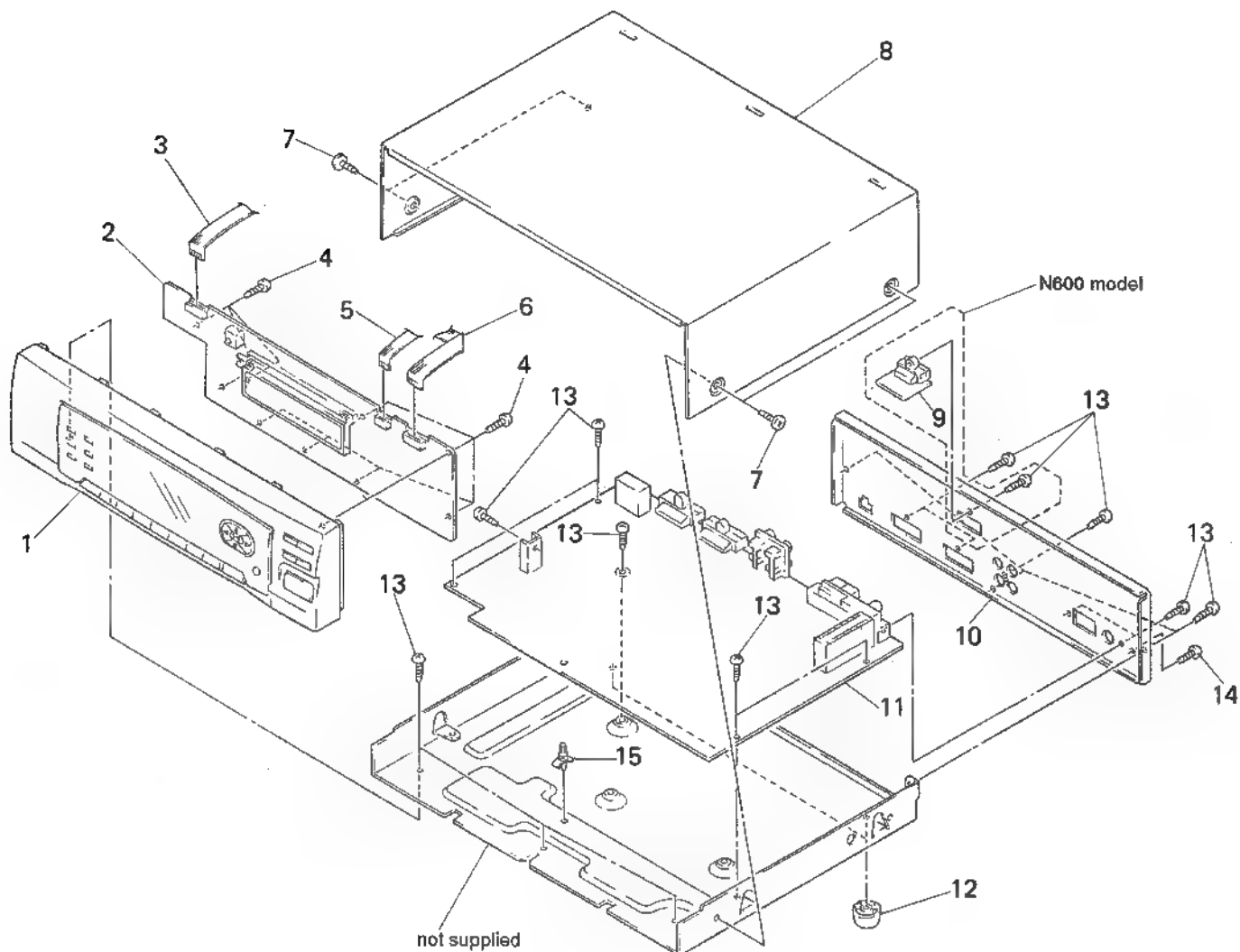
AEP:AEP model without power source for PS-LX56P.

**MX:** Mexican

AUS: Australian

AR:Argentin

AEP2:AEP model with power souce for PS-LX56P.





Ref. No.	Part No.	Description	Remark
1	X-4945-599-1	PANEL ASSY, FRONT (N500:AEP, AEP2, UK, G, IT, EE)	
1	X-4945-600-1	PANEL ASSY, FRONT (N500:E, MX, AR)	
1	X-4945-602-1	PANEL ASSY, FRONT (N600:AEP, UK, G, IT, EE)	
1	X-4945-620-1	PANEL ASSY, FRONT (N500:CIS, AUS, PX)	
1	X-4945-965-1	PANEL ASSY, FRONT (N600:CIS, AUS)	
1	X-4946-159-1	PANEL ASSY, FRONT (N600:E)	
* 2	A-4377-261-A	PANEL BOARD, COMPLETE (N500:AEP, AEP2, UK)	
* 2	A-4377-818-A	PANEL BOARD, COMPLETE (N600:EE)	
* 2	A-4377-820-A	PANEL BOARD, COMPLETE (N600:CIS)	
* 2	A-4377-824-A	PANEL BOARD, COMPLETE (N500:AUS, PX)	
* 2	A-4377-827-A	PANEL BOARD, COMPLETE (N500:EE)	
* 2	A-4377-832-A	PANEL BOARD, COMPLETE (N600:AEP, UK)	
* 2	A-4377-833-A	PANEL BOARD, COMPLETE (N500:E, MX, AR)	
* 2	A-4377-835-A	PANEL BOARD, COMPLETE (N500:CIS)	
* 2	A-4377-919-A	PANEL BOARD, COMPLETE (N500:G, IT)	
* 2	A-4377-928-A	PANEL BOARD, COMPLETE (N600:G, IT)	
* 2	A-4378-420-A	PANEL BOARD, COMPLETE (N600:E)	
* 2	A-4378-423-A	PANEL BOARD, COMPLETE (N600:AUS)	
3	1-769-544-11	WIRE (FLAT TYPE) (15 CORE)	
4	4-951-620-01	SCREW (2.6X8), +BVTP	
5	1-769-546-11	WIRE (FLAT TYPE) (7 CORE) (CIS, E, AUS/N500:MX, AR, PX)	
5	1-769-547-11	WIRE (FLAT TYPE) (9 CORE) (AEP, UK, G, IT, EE/N500:AEP2)	
6	1-769-545-11	WIRE (FLAT TYPE) (15 CORE)	
7	3-363-099-01	SCREW (CASE 3 TP2)	
8	4-969-777-11	CASE	
* 9	1-655-474-11	CONNECTOR BOARD (N600)	
* 10	4-969-784-02	PANEL, BACK (N500:UK)	
* 10	4-969-784-11	PANEL, BACK (N500:AEP, G, IT)	
* 10	4-969-784-21	PANEL, BACK (N500:EE, CIS)	
* 10	4-969-784-41	PANEL, BACK (N600:AEP, UK, G, IT)	

Ref. No.	Part No.	Description	Remark
* 10	4-969-784-51	PANEL, BACK (N600:EE, CIS)	
* 10	4-970-163-02	PANEL, BACK (N500:E)	
* 10	4-970-163-11	PANEL, BACK (N500:MX, AUS, PX)	
* 10	4-970-163-41	PANEL, BACK (N500:AR)	
* 10	4-970-163-51	PANEL, BACK (N600:E)	
* 10	4-970-163-61	PANEL, BACK (N600:AUS)	
* 10	4-973-530-01	PANEL, BACK (N500:AEP2)	
* 11	A-4377-390-A	MAIN BOARD, COMPLETE (N500:AEP)	
* 11	A-4377-391-A	MAIN BOARD, COMPLETE (N500:CIS)	
* 11	A-4377-392-A	MAIN BOARD, COMPLETE (N500:E)	
* 11	A-4377-394-A	MAIN BOARD, COMPLETE (N600:AEP, UK)	
* 11	A-4377-819-A	MAIN BOARD, COMPLETE (N600:EE)	
* 11	A-4377-821-A	MAIN BOARD, COMPLETE (N600:CIS)	
* 11	A-4377-825-A	MAIN BOARD, COMPLETE (N500:MX, AR, AUS, PX)	
* 11	A-4377-828-A	MAIN BOARD, COMPLETE (N500:EE)	
* 11	A-4377-830-A	MAIN BOARD, COMPLETE (N500:UK)	
* 11	A-4377-920-A	MAIN BOARD, COMPLETE (N500:G, IT)	
* 11	A-4377-922-A	MAIN BOARD, COMPLETE (N500:AEP2)	
* 11	A-4377-929-A	MAIN BOARD, COMPLETE (N600:G, IT)	
* 11	A-4378-421-A	MAIN BOARD, COMPLETE (N600:E, AUS)	
12	X-4941-228-1	FOOT ASSY	
13	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
14	7-682-548-04	SCREW +BVTT 3X8 (S)	
15	4-924-098-21	HOLDER, PC BOARD	

# SECTION 5 ELECTRICAL PARTS LIST

CONNECTOR

MAIN

## NOTE:

● Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.

● -XX and -X mean standardized parts, so they may have some difference from the original one.

## RESISTORS

All resistors are in ohms.

METAL: Metal-film resistor.

METAL OXIDE: Metal oxide-film resistor.

F: nonflammable

## Abbreviations

IT: Italian

G: German

EE: East European

AEP: AEP model without power source for PS-LX56P. /

MX: Mexican

AUS: Australian

AR: Argentin

AEP2: AEP model with power source for PS-LX56P.

● Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

## SEMICONDUCTORS

In each case, u:  $\mu$ , for example:

uA...:  $\mu$ A... uPA...:  $\mu$ PA...

uPB...:  $\mu$ PB... uPC...:  $\mu$ PC... uPD...:  $\mu$ PD...

## CAPACITORS

uF:  $\mu$ F

## COILS

uH:  $\mu$ H

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*	1-655-474-11	CONNECTOR BOARD (N600)		C12	1-126-934-11	ELECT	220uF 20% 16V
		*****		C13	1-162-306-11	CERAMIC	0.01uF 30% 16V
		< CAPACITOR >		C14	1-162-306-11	CERAMIC	0.01uF 30% 16V
C760	1-164-159-11	CERAMIC	0.1uF 50V (N600)	C15	1-164-159-11	CERAMIC	0.1uF 50V
C761	1-164-159-11	CERAMIC	0.1uF 50V (N600)				
		< CONNECTOR >		C16	1-126-964-11	ELECT	10uF 20% 50V
CN813	1-770-249-41	HOUSING, CONNECTOR(PC BOARD) 9P	(N600)	C17	1-124-902-00	ELECT	0.47uF 20% 50V
		*****		C18	1-124-903-11	ELECT	1uF 20% 50V
	A-4377-390-A	MAIN BOARD, COMPLETE (N500:AEP)		C19	1-124-903-11	ELECT	1uF 20% 50V
*	A-4377-922-A	MAIN BOARD, COMPLETE (N500:AEP2)		C20	1-126-964-11	ELECT	10uF 20% 50V
*	A-4377-830-A	MAIN BOARD, COMPLETE (N500:UK)		C21	1-126-964-11	ELECT	10uF 20% 50V
*	A-4377-920-A	MAIN BOARD, COMPLETE (N500:G, IT)		C22	1-126-964-11	ELECT	10uF 20% 50V
*	A-4377-828-A	MAIN BOARD, COMPLETE (N500:EE)		C23	1-126-964-11	ELECT	10uF 20% 50V
*	A-4377-391-A	MAIN BOARD, COMPLETE (N500:CIS)		C24	1-137-436-11	FILM	0.0039uF 5% 50V
*	A-4377-392-A	MAIN BOARD, COMPLETE (N500:E)		C25	1-137-436-11	FILM	0.0039uF 5% 50V
*	A-4377-825-A	MAIN BOARD, COMPLETE (N500:MX, AR, AUS, PX)					
	A-4377-394-A	MAIN BOARD, COMPLETE (N600:AEP, UK)		C26	1-136-160-00	FILM	0.039uF 5% 50V (AEP, UK, G, IT, EE, CIS/N500:AEP2)
*	A-4377-929-A	MAIN BOARD, COMPLETE (N600:G, IT)		C26	1-136-158-00	FILM	0.027uF 5% 50V (E, AUS/N500:MX, AR, PX)
*	A-4377-819-A	MAIN BOARD, COMPLETE (N600:EE)		C27	1-136-160-00	FILM	0.039uF 5% 50V (AEP, UK, G, IT, EE, CIS/N500:AEP2)
*	A-4377-821-A	MAIN BOARD, COMPLETE (N600:CIS)		C27	1-136-158-00	FILM	0.027uF 5% 50V (E, AUS/N500:MX, AR, PX)
*	A-4378-421-A	MAIN BOARD, COMPLETE (N600:E, AUS)		C28	1-124-903-11	ELECT	1uF 20% 50V
		*****		C29	1-162-294-31	CERAMIC	0.001uF 10% 50V
	1-537-770-11	TERMINAL BOARD, GROUND		C30	1-162-600-11	CERAMIC	0.0047uF 30% 16V
		(N500:AEP, AEP2, G, IT)		C31	1-126-967-11	ELECT	47uF 20% 16V
		< CAPACITOR >		C32	1-126-111-11	ELECT	3.3uF 20% 50V
C1	1-162-306-11	CERAMIC	0.01uF 30% 16V	C33	1-162-306-11	CERAMIC	0.01uF 30% 16V
C2	1-126-934-11	ELECT	220uF 20% 16V	C34	1-126-933-11	ELECT	100uF 20% 10V
C3	1-162-306-11	CERAMIC	0.01uF 30% 16V	C35	1-162-306-11	CERAMIC	0.01uF 30% 16V
C4	1-162-306-11	CERAMIC	0.01uF 30% 16V	C38	1-162-211-31	CERAMIC	33PF 5% 50V
C5	1-162-306-11	CERAMIC	0.01uF 30% 16V	C40	1-101-005-00	CERAMIC	0.22uF 50V
C6	1-162-306-11	CERAMIC	0.01uF 30% 16V				
C7	1-162-306-11	CERAMIC	0.01uF 30% 16V	C41	1-164-159-11	CERAMIC	0.1uF 50V (AEP, UK, EE, CIS/N500:AEP2)
C8	1-162-306-11	CERAMIC	0.01uF 30% 16V	C42	1-162-196-31	CERAMIC	5.6PF 10% 50V (AEP, UK, EE, CIS/N500:AEP2)
C9	1-101-004-00	CERAMIC	0.01uF 50V	C42	1-162-198-31	CERAMIC	8.2PF 10% 50V (G, IT, E, AUS/N500:MX, AR, PX)
		(EE, CIS, E, AUS/N500:MX, AR, PX)		C43	1-162-306-11	CERAMIC	0.01uF 30% 16V
C11	1-162-306-11	CERAMIC	0.01uF 30% 16V	C44	1-102-120-00	CERAMIC	0.0018uF 10% 50V (AEP, UK, EE, CIS/N500:AEP2)



# MAIN

Ref. No.	Part No.	Description	Remark
C45	1-162-301-11	CERAMIC	0.0015uF 30% 16V (AEP, UK, EE, CIS/N500:AEP2)
C46	1-101-005-00	CERAMIC	0.022uF 50V (AEP, UK, EE, CIS/N500:AEP2)
C51	1-164-031-11	CERAMIC	33PF 5% 50V
C52	1-164-027-11	CERAMIC	22PF 5% 50V
C53	1-162-306-11	CERAMIC	0.01uF 30% 16V
C54	1-126-967-11	ELECT	47uF 20% 16V
C55	1-162-294-31	CERAMIC	0.001uF 10% 50V
C56	1-162-306-11	CERAMIC	0.01uF 30% 16V
C57	1-162-306-11	CERAMIC	0.01uF 30% 16V
C58	1-162-306-11	CERAMIC	0.01uF 30% 16V
C61	1-124-925-11	ELECT	2.2uF 20% 100V
C62	1-164-159-11	CERAMIC	0.1uF 50V
C63	1-162-306-11	CERAMIC	0.01uF 30% 16V
C65	1-162-306-11	CERAMIC	0.01uF 30% 16V
C68	1-162-306-11	CERAMIC	0.01uF 30% 16V
C69	1-126-934-11	ELECT	220uF 20% 16V
C71	1-136-173-00	FILM	0.47uF 5% 50V (AEP, UK, EE, CIS/N500:AEP2)
C72	1-161-494-00	CERAMIC	0.022uF 25V (AEP, UK, EE, CIS/N500:AEP2)
C73	1-161-494-00	CERAMIC	0.022uF 25V (AEP, UK, EE, CIS/N500:AEP2)
C95	1-124-907-11	ELECT	10uF 20% 50V(CIS)
C96	1-124-907-11	ELECT	10uF 20% 50V(CIS)
C101	1-162-294-31	CERAMIC	0.001uF 10% 50V(CIS)
C102	1-130-014-00	FILM	470PF 5% 50V(CIS)
C103	1-124-902-00	ELECT	0.47uF 20% 50V(CIS)
C104	1-124-902-00	ELECT	0.47uF 20% 50V(CIS)
C105	1-164-098-11	CERAMIC	0.047uF 12V(CIS)
C106	1-124-903-11	ELECT	1uF 20% 50V(CIS)
C107	1-162-288-31	CERAMIC	330PF 10% 50V(CIS)
C110	1-130-471-00	MYLAR	0.001uF 5% 50V(CIS)
C111	1-130-471-00	MYLAR	0.001uF 5% 50V(CIS)
C112	1-130-736-11	FILM	0.01uF 5% 50V(CIS)
C113	1-130-736-11	FILM	0.01uF 5% 50V(CIS)
C114	1-124-903-11	ELECT	1uF 20% 50V(CIS)
C115	1-124-903-11	ELECT	1uF 20% 50V(CIS)
C116	1-124-903-11	ELECT	1uF 20% 50V(CIS)
C119	1-104-664-11	ELECT	47uF 20% 16V(CIS)
C120	1-162-306-11	CERAMIC	0.01uF 30% 16V(CIS)
C123	1-162-306-11	CERAMIC	0.01uF 30% 16V(CIS)
C124	1-162-306-11	CERAMIC	0.01uF 30% 16V(CIS)
C125	1-104-664-11	ELECT	47uF 20% 16V(CIS)
C126	1-124-903-11	ELECT	1uF 20% 50V(CIS)
C127	1-124-903-11	ELECT	1uF 20% 50V(CIS)
C128	1-104-663-11	ELECT	33uF 20% 16V(CIS)
C201	1-162-291-31	CERAMIC	560PF 10% 50V (AEP, UK, G, IT, EE/N500:AEP2)

Ref. No.	Part No.	Description	Remark
C202	1-162-306-11	CERAMIC	0.01uF 30% 16V (AEP, UK, G, IT, EE/N500:AEP2)
C203	1-126-964-11	ELECT	10uF 20% 50V (AEP, UK, G, IT, EE/N500:AEP2)
C204	1-162-288-31	CERAMIC	330PF 10% 50V (AEP, UK, G, IT, EE/N500:AEP2)
C205	1-126-964-11	ELECT	10uF 20% 50V (AEP, UK, G, IT, EE/N500:AEP2)
C206	1-124-925-11	ELECT	2.2uF 20% 100V (AEP, UK, G, IT, EE/N500:AEP2)
C207	1-162-306-11	CERAMIC	0.01uF 30% 16V (AEP, UK, G, IT, EE/N500:AEP2)
C208	1-162-291-31	CERAMIC	560PF 10% 50V (AEP, UK, G, IT, EE/N500:AEP2)
C209	1-102-527-11	CERAMIC	82PF 5% 50V (AEP, UK, G, IT, EE/N500:AEP2)
C210	1-101-880-00	CERAMIC	47PF 5% 50V (AEP, UK, G, IT, EE/N500:AEP2)
C211	1-162-306-11	CERAMIC	0.01uF 30% 16V (AEP, UK, G, IT, EE/N500:AEP2)
C212	1-126-964-11	ELECT	10uF 20% 50V (AEP, UK, G, IT, EE/N500:AEP2)
C213	1-162-294-31	CERAMIC	0.001uF 10% 50V (AEP, UK, G, IT, EE/N500:AEP2)
C214	1-162-294-31	CERAMIC	0.001uF 10% 50V (AEP, UK, G, IT, EE/N500:AEP2)
C215	1-162-306-11	CERAMIC	0.01uF 30% 16V (AEP, UK, G, IT, EE, CIS/N500:AEP2)
C301	1-162-288-31	CERAMIC	330PF 10% 50V
C303	1-162-282-31	CERAMIC	100PF 10% 50V
C304	1-162-282-31	CERAMIC	100PF 10% 50V
C305	1-126-963-11	ELECT	4.7uF 20% 50V
C306	1-162-600-11	CERAMIC	0.0047uF 30% 16V
C307	1-162-301-11	CERAMIC	0.0015uF 30% 16V
C308	1-124-902-00	ELECT	0.47uF 20% 50V (N500)
C308	1-124-464-11	ELECT	0.22uF 20% 50V (N600)
C309	1-126-967-11	ELECT	47uF 20% 16V
C310	1-162-286-21	CERAMIC	220PF 10% 50V
C311	1-162-282-31	CERAMIC	100PF 10% 50V
C312	1-162-282-31	CERAMIC	100PF 10% 50V
C314	1-124-903-11	ELECT	1uF 20% 50V
C315	1-124-903-11	ELECT	1uF 20% 50V
C320	1-162-306-11	CERAMIC	0.01uF 30% 16V
C321	1-162-306-11	CERAMIC	0.01uF 30% 16V
C351	1-162-288-31	CERAMIC	330PF 10% 50V
C353	1-162-282-31	CERAMIC	100PF 10% 50V
C354	1-162-282-31	CERAMIC	100PF 10% 50V
C355	1-126-963-11	ELECT	4.7uF 20% 50V
C356	1-162-600-11	CERAMIC	0.0047uF 30% 16V
C357	1-162-301-11	CERAMIC	0.0015uF 30% 16V
C358	1-124-902-00	ELECT	0.47uF 20% 50V (N500)

Ref. No.	Part No.	Description	Remark			
C358	1-124-464-11	ELECT	0.22uF	20%	50V	(N600)
C359	1-126-967-11	ELECT	47uF	20%	16V	
C360	1-162-286-21	CERAMIC	220PF	10%	50V	
C501	1-136-162-00	FILM	0.056uF	5%	50V	
C502	1-136-156-00	FILM	0.018uF	5%	50V	
C503	1-124-903-11	ELECT	1uF	20%	50V	
C504	1-162-302-11	CERAMIC	0.0022uF	30%	16V	
C505	1-136-162-00	FILM	0.056uF	5%	50V	
C506	1-162-600-11	CERAMIC	0.0047uF	30%	16V	
C507	1-136-169-00	FILM	0.22uF	5%	50V	
C508	1-136-162-00	FILM	0.056uF	5%	50V	
C509	1-136-162-00	FILM	0.056uF	5%	50V	
C510	1-126-964-11	ELECT	10uF	20%	50V	
C511	1-162-306-11	CERAMIC	0.01uF	30%	16V	
C533	1-126-964-11	ELECT	10uF	20%	50V	
C534	1-126-964-11	ELECT	10uF	20%	50V	
C535	1-164-159-11	CERAMIC	0.1uF		50V	
C536	1-164-159-11	CERAMIC	0.1uF		50V	
C537	1-162-286-21	CERAMIC	220PF	10%	50V	
C552	1-136-156-00	FILM	0.018uF	5%	50V	
C553	1-124-903-11	ELECT	1uF	20%	50V	
C554	1-162-302-11	CERAMIC	0.0022uF	30%	16V	
C555	1-136-162-00	FILM	0.056uF	5%	50V	
C556	1-162-600-11	CERAMIC	0.0047uF	30%	16V	
C557	1-136-169-00	FILM	0.22uF	5%	50V	
C558	1-136-162-00	FILM	0.056uF	5%	50V	
C801	1-124-122-11	ELECT	100uF	20%	50V	
C802	1-128-576-11	ELECT	100uF	20%	63V	
C803	1-162-306-11	CERAMIC	0.01uF	30%	16V	
C804	1-128-552-51	ELECT	47uF	20%	63V	
C805	1-124-122-11	ELECT	100uF	20%	50V	
C806	1-126-971-11	ELECT	470uF	20%	50V	
C807	1-162-306-11	CERAMIC	0.01uF	30%	16V	
C808	1-124-925-11	ELECT	2.2uF	20%	100V	
C809	1-124-925-11	ELECT	2.2uF	20%	100V	
C811	1-126-944-11	ELECT	3300uF	20%	25V	
C812	1-126-944-11	ELECT	3300uF	20%	25V	
C813	1-101-004-00	CERAMIC	0.01uF		50V	
C814	1-101-004-00	CERAMIC	0.01uF		50V	
C815	1-126-964-11	ELECT	10uF	20%	50V	
C816	1-126-964-11	ELECT	10uF	20%	50V	
C817	1-126-933-11	ELECT	100uF	20%	16V	
C818	1-126-933-11	ELECT	100uF	20%	16V	
C831	1-126-964-11	ELECT	10uF	20%	50V	
C832	1-124-463-00	ELECT	0.1uF	20%	50V	
C835	1-126-964-11	ELECT	10uF	20%	50V	
C837	1-126-933-11	ELECT	100uF	20%	10V	
C838	1-124-122-11	ELECT	100uF	20%	50V	

Ref. No.	Part No.	Description	Remark			
C839	1-124-477-11	ELECT	47uF	20%	25V	
C840	1-126-967-11	ELECT	47uF	20%	50V	
C841	1-124-478-11	ELECT	100uF	20%	25V	
C842	1-162-306-11	CERAMIC	0.01uF	30%	16V	
C843	1-126-943-11	ELECT	2200uF	20%	25V	
C844	1-124-477-11	ELECT	47uF	20%	25V	(N500:AEP2, UK, E)
C845	1-164-159-11	CERAMIC	0.1uF		50V	
C846	1-124-477-11	ELECT	47uF	20%	25V	
C851	1-136-177-00	FILM	1uF	5%	50V	
C852	1-136-169-00	FILM	0.22uF	5%	50V	
C853	1-124-903-11	ELECT	1uF	20%	50V	
C854	1-136-169-00	FILM	0.22uF	5%	50V	
C855	1-136-162-00	FILM	0.056uF	5%	50V	
C856	1-124-903-11	ELECT	1uF	20%	50V	
C857	1-136-161-00	FILM	0.047uF	5%	50V	
C858	1-136-153-00	FILM	0.01uF	5%	50V	
C859	1-124-903-11	ELECT	1uF	20%	50V	
C860	1-130-478-00	MYLAR	0.0047uF	5%	50V	
C861	1-124-903-11	ELECT	1uF	20%	50V	
C862	1-126-964-11	ELECT	10uF	20%	50V	
C863	1-126-964-11	ELECT	10uF	20%	50V	
C871	1-126-964-11	ELECT	10uF	20%	50V	
C872	1-124-925-11	ELECT	2.2uF	20%	100V	
C880	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C883	1-162-306-11	CERAMIC	0.01uF	30%	16V	
C884	1-162-306-11	CERAMIC	0.01uF	30%	16V	
C885	1-164-159-11	CERAMIC	0.1uF		50V	(N500:AEP2, UK, E)
C886	1-162-282-31	CERAMIC	100PF	10%	50V	(N600)
C887	1-161-494-00	CERAMIC	0.022uF		25V	
C888	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C890	1-164-159-11	CERAMIC	0.1uF		50V	(N500:E, MX, AR, AU, PX)

< FILTER >

CF1	1-567-389-11	FILTER, CERAMIC				
CF2	1-760-393-11	FILTER, CERAMIC	(AEP, UK, G, IT/N500:AEP2)			
CF3	1-760-393-11	FILTER, CERAMIC	(AEP, UK, G, IT/N500:AEP2)			
CF3	1-567-389-11	FILTER, CERAMIC	(EE, CIS, E, AUS/N500:MX, AR, PX)			
CF4	1-760-220-11	FILTER, CERAMIC	(10.7MHz)			
CP5	1-527-981-00	FILTER, CERAMIC	(450KHz)			
CF6	1-577-075-11	OSCILLATOR, CERAMIC	(456KHz)			

< CONNECTOR >

* CN2	1-568-828-11	SOCKET, CONNECTOR 9P	(AEP, UK, G, IT, EE/N500:AEP2)			
* CN2	1-568-826-11	SOCKET, CONNECTOR 7P	(CIS, E, AUS/N500:MX, AR, PX)			

# MAIN

Ref. No.	Part No.	Description	Remark
* CN801	1-568-936-11	PIN, CONNECTOR 9P (N600)	
CN802	1-764-017-11	HOUSING, CONNECTOR(PC BOARD)17P	
CN803	1-770-248-31	HOUSING, CONNECTOR(PC BOARD)16P	
* CN805	1-566-210-11	PIN, CONNECTOR 3P (POWER SOURCE)	(N500:AEP2, UK, E)
* CN820	1-568-834-11	SOCKET, CONNECTOR 15P	
* CN821	1-568-834-11	SOCKET, CONNECTOR 15P	
< TRIMMER >			
CT101	1-141-260-00	CAP, TRIMMER 50PF (CIS)	
< DIODE >			
D1	8-719-987-63	DIODE 1N4148M	
D2	8-719-987-63	DIODE 1N4148M (CIS)	
D3	8-719-987-63	DIODE 1N4148M (CIS)	
D101	8-719-987-63	DIODE 1N4148M (CIS)	
D103	8-719-987-63	DIODE 1N4148M (CIS)	
D104	8-719-987-63	DIODE 1N4148M (CIS)	
D105	8-719-987-63	DIODE 1N4148M (CIS)	
D801	8-719-024-99	DIODE 11ES2-NTA2B	
D802	8-719-024-99	DIODE 11ES2-NTA2B	
D803	8-719-024-99	DIODE 11ES2-NTA2B	
D804	8-719-024-99	DIODE 11ES2-NTA2B	
D805	8-719-024-99	DIODE 11ES2-NTA2B	
D806	8-719-024-99	DIODE 11ES2-NTA2B	
D807	8-719-934-22	DIODE HZS30-2L	
D808	8-719-933-48	DIODE HZS7B3L	
D809	8-719-987-63	DIODE 1N4148M	
D810	8-719-024-99	DIODE 11ES2-NTA2B	
D811	8-719-024-99	DIODE 11ES2-NTA2B	
D812	8-719-001-42	DIODE UZL-11M1	
D815	8-719-024-99	DIODE 11ES2-NTA2B	
D816	8-719-024-99	DIODE 11ES2-NTA2B	
D817	8-719-024-99	DIODE 11ES2-NTA2B	
D818	8-719-024-99	DIODE 11ES2-NTA2B	
D819	8-719-024-99	DIODE 11ES2-NTA2B	
D820	8-719-024-99	DIODE 11ES2-NTA2B	
D821	8-719-024-99	DIODE 11ES2-NTA2B	
D822	8-719-024-99	DIODE 11ES2-NTA2B	
D823	8-719-024-99	DIODE 11ES2-NTA2B (N500:AEP2, UK, E)	
D824	8-719-024-99	DIODE 11ES2-NTA2B (N500:AEP2, UK, E)	
D825	8-719-024-99	DIODE 11ES2-NTA2B (N500:AEP2, UK, E)	
D826	8-719-024-99	DIODE 11ES2-NTA2B	
D827	8-719-024-99	DIODE 11ES2-NTA2B	
D828	8-719-024-99	DIODE 11ES2-NTA2B	
D829	8-719-024-99	DIODE 11ES2-NTA2B	
D830	8-719-024-99	DIODE 11ES2-NTA2B	
D831	8-719-000-84	DIODE UZL-7M1	
D851	8-719-987-63	DIODE 1N4148M	

Ref. No.	Part No.	Description	Remark
D852	8-719-987-63	DIODE 1N4148M	
D853	8-719-987-63	DIODE 1N4148M	
D854	8-719-987-63	DIODE 1N4148M	
D871	8-719-987-63	DIODE 1N4148M	
D872	8-719-815-85	DIODE 1S1585	
< TERMINAL >			
EB801	1-537-770-11	TERMINAL BOARD, GROUND	(UK, EE, CIS, E, AUS, /N500:MX, AR, PX)
< FERRITE BEAD >			
FB801	1-412-473-21	INDUCTOR 0UH (N600)	
< FRONT END >			
FE1	1-693-253-21	FRONT END (4 GANG)	(AEP, UK, G, IT/N500:AEP2)
FE1	1-693-244-21	FRONT END (3 GANG) (EE, CIS)	
FE1	1-693-090-51	FRONT END (FM) (2 GANG)	(E, AUS/N500:MX, AR, PX)
< IC >			
IC3	8-759-176-03	IC LA1835	
IC51	8-759-288-54	IC LC72130	
IC101	8-759-063-04	IC IR3R42 (CIS)	
IC102	8-759-140-53	IC uPD4053BC (CIS)	
IC201	8-759-634-51	IC M5218AP (AEP, UK, G, IT, EE/N500:AEP2)	
IC202	8-759-169-99	IC SAA6579 (AEP, UK, G, IT, EE/N500:AEP2)	
IC301	8-759-000-48	IC MC14052BCP	
IC302	8-759-140-53	IC uPD4053BC	
IC303	8-759-634-51	IC M5218AP	
IC401	8-759-634-51	IC M5218AP	
IC501	8-759-291-98	IC M62423FP	
IC502	8-759-000-49	IC MC14066BCP	
IC801	8-759-820-13	IC L78MR06	
IC802	8-759-604-86	IC M5F7807L	
IC803	8-759-604-90	IC M5F7907L	
IC804	8-759-231-53	IC TA7805S	
IC850	8-759-634-51	IC M5218AP	
IC851	8-759-000-48	IC MC14052BCP	
< IFT >			
IFT1	1-409-636-11	TRANSFORMER, IF (CERAMIC FILTER)	
< JACK >			
* J801	1-580-912-11	JACK, PIN 4P (PHONO/AUX IN)	(N600:AEP, G, IT/N500)
J801	1-580-905-11	JACK, PIN (PHONO/AUX IN)	(N600:UK, EE, CIS, E, AUS)

Ref. No.	Part No.	Description	Remark
< COIL >			
L1	1-407-500-00	INDUCTOR 4.7mH (AEP, UK, EE, CIS/N500:AEP2)	
L1	1-410-688-31	INDUCTOR 1.5mH (G, IT, E, AUS/N500:MX, AR, PX)	
L2	1-410-524-41	INDUCTOR 220uH (AEP/N500:AEP2)	
L2	1-410-525-11	INDUCTOR 220uH (UK, EE, CIS)	
L31	1-414-142-11	INDUCTOR 1uH	
L101	1-409-497-11	COIL (FILTER) (CIS)	
< FILTER >			
LPF1	1-239-597-11	FILTER, LOW PASS	
LPF2	1-239-597-11	FILTER, LOW PASS	
< TRANSISTOR >			
Q1	8-729-230-99	TRANSISTOR 2SC2669-OY	
Q2	8-729-230-99	TRANSISTOR 2SC2669-OY	
Q3	8-729-230-99	TRANSISTOR 2SC2669-OY	
Q4	8-729-230-99	TRANSISTOR 2SC2669-OY	
Q5	8-729-422-57	TRANSISTOR UN4111	
Q6	8-729-119-76	TRANSISTOR 2SA1175-HFE (AEP, UK, EE, CIS/N500:AEP2)	
Q7	8-729-119-76	TRANSISTOR 2SA1175-HFE (AEP, UK, EE, CIS/N500:AEP2)	
Q8	8-729-900-80	TRANSISTOR DTC114ES (AEP, UK, EE, CIS/N500:AEP2)	
Q9	8-729-900-80	TRANSISTOR DTC114ES (AEP, UK, EE, CIS/N500:AEP2)	
Q10	8-729-900-80	TRANSISTOR DTC114ES (AEP, UK, EE, CIS/N500:AEP2)	
Q11	8-729-900-80	TRANSISTOR DTC114ES (AEP, UK, EE, CIS/N500:AEP2)	
Q101	8-729-422-57	TRANSISTOR UN4111 (CIS)	
Q102	8-729-900-80	TRANSISTOR DTC114ES (CIS)	
Q103	8-729-900-80	TRANSISTOR DTC114ES (CIS)	
Q320	8-729-900-80	TRANSISTOR DTC114ES	
Q501	8-729-900-80	TRANSISTOR DTC114ES	
Q502	8-729-422-57	TRANSISTOR UN4111	
Q503	8-729-422-57	TRANSISTOR UN4111	
Q504	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q505	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q801	8-729-111-29	TRANSISTOR 2SD1616A-K	
Q802	8-729-801-84	TRANSISTOR 2SB1013-4 (N600)	
Q803	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q804	8-729-030-19	TRANSISTOR 2SB1640	
Q805	8-729-209-15	TRANSISTOR 2SD2012	
Q806	8-729-900-80	TRANSISTOR DTC114ES	
Q807	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q808	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q810	8-729-422-57	TRANSISTOR UN4111	

Ref. No.	Part No.	Description	Remark
Q811	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q812	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q814	8-729-422-57	TRANSISTOR UN4111	
Q815	8-729-900-80	TRANSISTOR DTC114ES	
Q816	8-729-141-30	TRANSISTOR 2SC3623A-LK (EXCEPT CIS)	
< RESISTOR >			
R4	1-249-401-11	CARBON 47 5% 1/4W	
R5	1-249-411-11	CARBON 330 5% 1/4W	
R6	1-249-433-11	CARBON 22K 5% 1/4W	
R7	1-249-411-11	CARBON 330 5% 1/4W	
R8	1-249-411-11	CARBON 330 5% 1/4W	
R9	1-249-433-11	CARBON 22K 5% 1/4W	
R10	1-249-411-11	CARBON 330 5% 1/4W	
R11	1-249-433-11	CARBON 22K 5% 1/4W (AEP, UK, G, IT, EE, CIS/N500:AEP2)	
R11	1-249-411-11	CARBON 330 5% 1/4W (E, AUS/N500:MX, AR, PX)	
R12	1-249-411-11	CARBON 330 5% 1/4W	
R13	1-249-411-11	CARBON 330 5% 1/4W (AEP, UK, G, IT, EE, CIS/N500:AEP2)	
R14	1-249-433-11	CARBON 22K 5% 1/4W (AEP, UK, G, IT, EE, CIS/N500:AEP2)	
R15	1-249-405-11	CARBON 100 5% 1/4W	
R16	1-249-442-11	CARBON 510 5% 1/4W	
R17	1-249-403-11	CARBON 68 5% 1/4W	
R18	1-249-423-11	CARBON 3.3K 5% 1/4W	
R19	1-249-441-11	CARBON 100K 5% 1/4W	
R20	1-249-429-11	CARBON 10K 5% 1/4W	
R25	1-249-429-11	CARBON 10K 5% 1/4W	
R26	1-249-429-11	CARBON 10K 5% 1/4W (AEP, UK, EE, CIS/N500:AEP2)	
R28	1-249-401-11	CARBON 47 5% 1/4W	
R40	1-249-399-11	CARBON 33 5% 1/4W	
R41	1-249-429-11	CARBON 10K 5% 1/4W (AEP, UK, EE, CIS/N500:AEP2)	
R42	1-249-429-11	CARBON 10K 5% 1/4W (AEP, UK, EE, CIS/N500:AEP2)	
R43	1-249-441-11	CARBON 100K 5% 1/4W	
R44	1-249-425-11	CARBON 4.7K 5% 1/4W (AEP, UK, EE, CIS/N500:AEP2)	
R45	1-249-437-11	CARBON 47K 5% 1/4W	
R46	1-247-903-00	CARBON 1M 5% 1/4W (AEP, UK, EE, CIS/N500:AEP2)	
R47	1-249-433-11	CARBON 22K 5% 1/4W (AEP, UK, EE, CIS/N500:AEP2)	
R48	1-249-437-11	CARBON 47K 5% 1/4W (AEP, UK, EE, CIS/N500:AEP2)	
R50	1-249-401-11	CARBON 47 5% 1/4W	
R52	1-249-429-11	CARBON 10K 5% 1/4W	
R53	1-249-423-11	CARBON 3.3K 5% 1/4W	
R55	1-249-417-11	CARBON 1K 5% 1/4W	
R56	1-249-417-11	CARBON 1K 5% 1/4W (AEP, UK, EE, CIS/N500:AEP2)	



# MAIN

Ref. No.	Part No.	Description	Remark
R57	1-249-417-11	CARBON	1K 5% 1/4W (AEP, UK, EE, CIS/N500:AEP2)
R58	1-249-417-11	CARBON	1K 5% 1/4W
R59	1-249-417-11	CARBON	1K 5% 1/4W
R60	1-249-405-11	CARBON	100 5% 1/4W
R61	1-249-423-11	CARBON	3.3K 5% 1/4W
R62	1-249-425-11	CARBON	4.7K 5% 1/4W
R63	1-249-425-11	CARBON	4.7K 5% 1/4W
R64	1-249-425-11	CARBON	4.7K 5% 1/4W
R65	1-247-807-31	CARBON	100 5% 1/4W
R66	1-249-425-11	CARBON	4.7K 5% 1/4W
R71	1-249-423-11	CARBON	3.3K 5% 1/4W (AEP, UK, EE, CIS/N500:AEP2)
R72	1-249-433-11	CARBON	22K 5% 1/4W (AEP, UK, EE, CIS/N500:AEP2)
R73	1-249-425-11	CARBON	4.7K 5% 1/4W (AEP, UK, EE, CIS/N500:AEP2)
R74	1-249-425-11	CARBON	4.7K 5% 1/4W (AEP, UK, EE, CIS/N500:AEP2)
R75	1-249-425-11	CARBON	4.7K 5% 1/4W (AEP, UK, EE, CIS/N500:AEP2)
R101	1-249-432-11	CARBON	18K 5% 1/4W (CIS)
R102	1-249-435-11	CARBON	33K 5% 1/4W (CIS)
R103	1-249-427-11	CARBON	6.8K 5% 1/4W (CIS)
R104	1-247-858-11	CARBON	13K 5% 1/4W (CIS)
R105	1-249-417-11	CARBON	1K 5% 1/4W (CIS)
R106	1-249-417-11	CARBON	1K 5% 1/4W (CIS)
R107	1-249-441-11	CARBON	100K 5% 1/4W (CIS)
R108	1-249-440-11	CARBON	82K 5% 1/4W (CIS)
R109	1-249-437-11	CARBON	47K 5% 1/4W (CIS)
R110	1-249-429-11	CARBON	10K 5% 1/4W (CIS)
R111	1-249-429-11	CARBON	10K 5% 1/4W (CIS)
R114	1-249-426-11	CARBON	5.6K 5% 1/4W (CIS)
R115	1-249-426-11	CARBON	5.6K 5% 1/4W (CIS)
R116	1-249-441-11	CARBON	100K 5% 1/4W (CIS)
R117	1-249-441-11	CARBON	100K 5% 1/4W (CIS)
R118	1-249-429-11	CARBON	10K 5% 1/4W (CIS)
R119	1-249-429-11	CARBON	10K 5% 1/4W (CIS)
R121	1-249-434-11	CARBON	27K 5% 1/4W (CIS)
R122	1-249-441-11	CARBON	100K 5% 1/4W (CIS)
R201	1-249-441-11	CARBON	100K 5% 1/4W (AEP, UK, G, IT, EE/N500:AEP2)
R202	1-249-441-11	CARBON	100K 5% 1/4W (AEP, UK, G, IT, EE/N500:AEP2)
R203	1-249-433-11	CARBON	22K 5% 1/4W (AEP, UK, G, IT, EE/N500:AEP2)
R204	1-249-426-11	CARBON	5.6K 5% 1/4W (AEP, UK, G, IT, EE/N500:AEP2)
R205	1-247-807-31	CARBON	100 5% 1/4W (AEP, UK, G, IT, EE/N500:AEP2)
R206	1-249-421-11	CARBON	2.2K 5% 1/4W (AEP, UK, G, IT, EE/N500:AEP2)
R301	1-249-417-11	CARBON	1K 5% 1/4W
R302	1-249-417-11	CARBON	1K 5% 1/4W

Ref. No.	Part No.	Description	Remark
R303	1-249-437-11	CARBON	47K 5% 1/4W
R304	1-249-416-11	CARBON	820 5% 1/4W
R305	1-247-897-11	CARBON	560K 5% 1/4W
R306	1-249-437-11	CARBON	47K 5% 1/4W
R307	1-249-422-11	CARBON	2.7K 5% 1/4W (N500)
R307	1-249-409-11	CARBON	220 5% 1/4W (N600)
R308	1-249-427-11	CARBON	6.8K 5% 1/4W (N500)
R308	1-249-441-11	CARBON	100K 5% 1/4W (N600)
R309	1-249-409-11	CARBON	220 5% 1/4W
R310	1-249-425-11	CARBON	4.7K 5% 1/4W (N500)
R310	1-249-417-11	CARBON	1K 5% 1/4W (N600)
R311	1-249-431-11	CARBON	15K 5% 1/4W (N500)
R311	1-249-441-11	CARBON	100K 5% 1/4W (N600)
R312	1-249-417-11	CARBON	1K 5% 1/4W
R313	1-249-417-11	CARBON	1K 5% 1/4W
R314	1-249-417-11	CARBON	1K 5% 1/4W
R315	1-247-807-31	CARBON	100 5% 1/4W
R316	1-249-417-11	CARBON	1K 5% 1/4W
R317	1-249-417-11	CARBON	1K 5% 1/4W
R318	1-249-419-11	CARBON	1.5K 5% 1/4W
R319	1-249-417-11	CARBON	1K 5% 1/4W
R320	1-249-429-11	CARBON	10K 5% 1/4W
R321	1-249-429-11	CARBON	10K 5% 1/4W
R322	1-249-429-11	CARBON	10K 5% 1/4W
R323	1-249-429-11	CARBON	10K 5% 1/4W
R324	1-249-423-11	CARBON	3.3K 5% 1/4W (N500)
R324	1-249-431-11	CARBON	15K 5% 1/4W (N600)
R327	1-249-417-11	CARBON	1K 5% 1/4W (EXCEPT CIS)
R328	1-249-429-11	CARBON	10K 5% 1/4W
R329	1-249-429-11	CARBON	10K 5% 1/4W
R342	1-249-441-11	CARBON	100K 5% 1/4W
R343	1-249-441-11	CARBON	100K 5% 1/4W
R345	1-247-807-31	CARBON	100 5% 1/4W
R346	1-247-807-31	CARBON	100 5% 1/4W
R351	1-249-417-11	CARBON	1K 5% 1/4W
R352	1-249-417-11	CARBON	1K 5% 1/4W
R353	1-249-437-11	CARBON	47K 5% 1/4W
R354	1-249-416-11	CARBON	820 5% 1/4W
R355	1-247-897-11	CARBON	560K 5% 1/4W
R356	1-249-437-11	CARBON	47K 5% 1/4W
R357	1-249-422-11	CARBON	2.7K 5% 1/4W (N500)
R357	1-249-409-11	CARBON	220 5% 1/4W (N600)
R358	1-249-427-11	CARBON	6.8K 5% 1/4W (N500)
R358	1-249-441-11	CARBON	100K 5% 1/4W (N600)
R359	1-249-409-11	CARBON	220 5% 1/4W
R360	1-249-425-11	CARBON	4.7K 5% 1/4W (N500)
R360	1-249-417-11	CARBON	1K 5% 1/4W (N600)
R361	1-249-431-11	CARBON	15K 5% 1/4W (N500)

Ref. No.	Part No.	Description	Remark		
R361	1-249-441-11	CARBON	100K	5%	1/4W (N600)
R364	1-249-417-11	CARBON	1K	5%	1/4W
R366	1-249-417-11	CARBON	1K	5%	1/4W
R367	1-249-417-11	CARBON	1K	5%	1/4W
R368	1-249-419-11	CARBON	1.5K	5%	1/4W
R369	1-249-417-11	CARBON	1K	5%	1/4W
R370	1-249-441-11	CARBON	100K	5%	1/4W
R371	1-247-883-00	CARBON	150K	5%	1/4W
R374	1-249-423-11	CARBON	3.3K	5%	1/4W (N500)
R374	1-249-431-11	CARBON	15K	5%	1/4W (N600)
R382	1-249-401-11	CARBON	47	5%	1/4W (N600)
R383	1-249-401-11	CARBON	47	5%	1/4W (N600)
R501	1-249-417-11	CARBON	1K	5%	1/4W
R502	1-249-417-11	CARBON	1K	5%	1/4W
R503	1-249-417-11	CARBON	1K	5%	1/4W
R504	1-249-441-11	CARBON	100K	5%	1/4W (N500)
R504	1-249-433-11	CARBON	22K	5%	1/4W (N600)
R505	1-249-426-11	CARBON	5.6K	5%	1/4W
R506	1-249-441-11	CARBON	100K	5%	1/4W
R510	1-249-417-11	CARBON	1K	5%	1/4W (N500)
R510	1-249-423-11	CARBON	3.3K	5%	1/4W (N600)
R554	1-249-441-11	CARBON	100K	5%	1/4W (N500)
R554	1-249-433-11	CARBON	22K	5%	1/4W (N600)
R555	1-249-426-11	CARBON	5.6K	5%	1/4W
R556	1-249-417-11	CARBON	1K	5%	1/4W
R557	1-247-887-00	CARBON	220K	5%	1/4W
R558	1-249-417-11	CARBON	1K	5%	1/4W
R559	1-247-887-00	CARBON	220K	5%	1/4W
R560	1-249-417-11	CARBON	1K	5%	1/4W (N500)
R560	1-249-423-11	CARBON	3.3K	5%	1/4W (N600)
R801	1-249-441-11	CARBON	100K	5%	1/4W
R805	1-249-421-11	CARBON	2.2K	5%	1/4W
△R806	1-212-869-00	FUSIBLE	33	5%	1/4W F
R807	1-260-070-11	CARBON	3.3	5%	1/2W
R808	1-215-871-11	METAL OXIDE	2.2K	5%	1W
R810	1-249-429-11	CARBON	10K	5%	1/4W
R811	1-249-429-11	CARBON	10K	5%	1/4W
R812	1-249-429-11	CARBON	10K	5%	1/4W (N600)
R813	1-249-429-11	CARBON	10K	5%	1/4W (N600)
R814	1-249-429-11	CARBON	10K	5%	1/4W
R815	1-249-429-11	CARBON	10K	5%	1/4W
R816	1-249-441-11	CARBON	100K	5%	1/4W
R819	1-249-429-11	CARBON	10K	5%	1/4W (N500)
R820	1-249-417-11	CARBON	1K	5%	1/4W
R821	1-249-417-11	CARBON	1K	5%	1/4W
R822	1-249-417-11	CARBON	1K	5%	1/4W
R823	1-249-417-11	CARBON	1K	5%	1/4W
R824	1-249-417-11	CARBON	1K	5%	1/4W
R828	1-249-423-11	CARBON	3.3K	5%	1/4W

Ref. No.	Part No.	Description	Remark		
△R842	1-212-873-11	FUSIBLE	47	5%	1/4W F
△R843	1-212-873-11	FUSIBLE	47	5%	1/4W F (N600)
R844	1-249-429-11	CARBON	10K	5%	1/4W
R851	1-249-416-11	CARBON	820	5%	1/4W
R852	1-249-429-11	CARBON	10K	5%	1/4W
R853	1-249-441-11	CARBON	100K	5%	1/4W
R854	1-249-417-11	CARBON	1K	5%	1/4W
R855	1-249-429-11	CARBON	10K	5%	1/4W
R856	1-249-441-11	CARBON	100K	5%	1/4W
R857	1-249-417-11	CARBON	1K	5%	1/4W
R858	1-249-430-11	CARBON	12K	5%	1/4W
R859	1-249-441-11	CARBON	100K	5%	1/4W
R860	1-249-429-11	CARBON	10K	5%	1/4W
R861	1-249-441-11	CARBON	100K	5%	1/4W
R862	1-249-423-11	CARBON	3.3K	5%	1/4W
R863	1-249-423-11	CARBON	3.3K	5%	1/4W
R864	1-249-429-11	CARBON	10K	5%	1/4W
R865	1-249-429-11	CARBON	10K	5%	1/4W
R866	1-249-417-11	CARBON	1K	5%	1/4W
R867	1-249-417-11	CARBON	1K	5%	1/4W
R869	1-249-429-11	CARBON	10K	5%	1/4W (N500)
R871	1-249-433-11	CARBON	22K	5%	1/4W
R872	1-249-433-11	CARBON	22K	5%	1/4W
R873	1-249-441-11	CARBON	100K	5%	1/4W
R874	1-247-807-31	CARBON	100	5%	1/4W
R875	1-249-435-11	CARBON	33K	5%	1/4W
R876	1-249-417-11	CARBON	1K	5%	1/4W
R878	1-249-423-11	CARBON	3.3K	5%	1/4W
R890	1-249-423-11	CARBON	3.3K	5%	1/4W (N500)
R890	1-249-425-11	CARBON	4.7K	5%	1/4W (N600)
R891	1-249-423-11	CARBON	3.3K	5%	1/4W (N500)
R891	1-249-425-11	CARBON	4.7K	5%	1/4W (N600)
R893	1-249-423-11	CARBON	3.3K	5%	1/4W (N500)
R893	1-249-417-11	CARBON	1K	5%	1/4W (N600)
R894	1-249-423-11	CARBON	3.3K	5%	1/4W (N500)
R894	1-249-417-11	CARBON	1K	5%	1/4W (N600)

< COMPOSITION CIRCUIT BLOCK >

RB1	1-239-876-11	ENCAPSULATED COMPONENT	(AEP, UK, EE, CIS/N500:AEP2)
RB1	1-239-260-11	ENCAPSULATED COMPONENT	(G, IT, E, AUS/N500:MX, AR, PX)
RB2	1-236-463-11	ENCAPSULATED COMPONENT	(AEP, UK, EE, CIS/N500:AEP2)

< VARIABLE RESISTOR >

RV1	1-238-601-11	RES. ADJ. CARBON 22K
RV2	1-238-601-11	RES. ADJ. CARBON 22K
RV101	1-238-601-11	RES. ADJ. CARBON 22K (CIS)

The components identified by mark △ or dotted line with mark. △ are critical for safety. Replace only with part number specified.

# MAIN

# PANEL

Ref. No.	Part No.	Description	Remark
RV102	1-238-599-11	RES, ADJ, CARBON 4.7K(CIS)	
		< RELAY >	
RY801	1-755-067-11	RELAY	
		< TERMINAL >	
TM1	1-537-488-11	TERMINAL BOARD (ANT)	
		(AEP, UK, G, IT, EE, CIS/N500:AEP2)	
TM1	1-537-238-21	TERMINAL BOARD (E, AUS/N500:MX, AR, PX)	
		< TEST PIN >	
+ TP101	1-560-061-00	PIN, CONNECTOR 3P (CIS)	
* TP102	1-560-061-00	PIN, CONNECTOR 3P (CIS)	
		< VIBRATOR >	
X201	1-579-900-21	VIBRATOR, CRYSTAL (4.332MHz)	
		(AEP, UK, G, IT, EE/N500:AEP2)	
		< VIBRATOR >	
XT51	1-760-549-11	VIBRATOR, CRYSTAL (4.5MHz)	
*****			
*	A-4377-261-A	PANEL BOARD, COMPLETE (N500:AEP, AEP2, UK)	
*	A-4377-824-A	PANEL BOARD, COMPLETE (N500:AUS, PX)	
*	A-4377-827-A	PANEL BOARD, COMPLETE (N500:EE)	
*	A-4377-833-A	PANEL BOARD, COMPLETE (N500:E, MX, AR)	
*	A-4377-835-A	PANEL BOARD, COMPLETE (N500:CIS)	
*	A-4377-919-A	PANEL BOARD, COMPLETE (N500:G, IT)	
*	A-4377-832-A	PANEL BOARD, COMPLETE (N600:AEP, UK)	
*	A-4378-423-A	PANEL BOARD, COMPLETE (N600:AUS)	
*	A-4377-818-A	PANEL BOARD, COMPLETE (N600:EE)	
*	A-4378-420-A	PANEL BOARD, COMPLETE (N600:E)	
*	A-4377-820-A	PANEL BOARD, COMPLETE (N600:CIS)	
*	A-4377-928-A	PANEL BOARD, COMPLETE (N600:G, IT)	
*****			
*	4-949-935-01	CUSHION (FL)	
*	4-969-714-01	HOLDER, FL TUBE	
		< CAPACITOR >	
C701	1-124-589-11	ELECT 47uF 20% 16V	
C702	1-161-494-00	CERAMIC 0.022uF 25V	
C703	1-161-494-00	CERAMIC 0.022uF 25V	
C704	1-126-245-11	ELECT 330uF 20% 6.3V	
C705	1-126-245-11	ELECT 330uF 20% 6.3V	
C706	1-164-159-11	CERAMIC 0.1uF 50V	
C707	1-164-159-11	CERAMIC 0.1uF 50V	

Ref. No.	Part No.	Description	Remark
C708	1-164-159-11	CERAMIC 0.1uF 50V	
C709	1-162-286-21	CERAMIC 220PF 10% 50V	
C710	1-162-286-21	CERAMIC 220PF 10% 50V	
C711	1-162-286-21	CERAMIC 220PF 10% 50V	
C712	1-162-286-21	CERAMIC 220PF 10% 50V	
C713	1-162-286-21	CERAMIC 220PF 10% 50V	
C714	1-162-286-21	CERAMIC 220PF 10% 50V	
C715	1-162-286-21	CERAMIC 220PF 10% 50V	
C716	1-162-286-21	CERAMIC 220PF 10% 50V	
C717	1-162-286-21	CERAMIC 220PF 10% 50V	
C718	1-162-286-21	CERAMIC 220PF 10% 50V	
C719	1-162-286-21	CERAMIC 220PF 10% 50V	
C720	1-162-286-21	CERAMIC 220PF 10% 50V	
C721	1-162-286-21	CERAMIC 220PF 10% 50V	
C722	1-162-286-21	CERAMIC 220PF 10% 50V	
C723	1-162-286-21	CERAMIC 220PF 10% 50V	
C724	1-162-286-21	CERAMIC 220PF 10% 50V	
C725	1-162-286-21	CERAMIC 220PF 10% 50V	
C726	1-162-286-21	CERAMIC 220PF 10% 50V	
C727	1-162-286-21	CERAMIC 220PF 10% 50V	
C728	1-162-286-21	CERAMIC 220PF 10% 50V	
C729	1-162-286-21	CERAMIC 220PF 10% 50V	
C730	1-162-286-21	CERAMIC 220PF 10% 50V	
C731	1-162-286-21	CERAMIC 220PF 10% 50V	
C732	1-162-286-21	CERAMIC 220PF 10% 50V	
C733	1-162-286-21	CERAMIC 220PF 10% 50V	
C734	1-162-286-21	CERAMIC 220PF 10% 50V	
C735	1-162-286-21	CERAMIC 220PF 10% 50V	
C736	1-162-286-21	CERAMIC 220PF 10% 50V	
C737	1-162-286-21	CERAMIC 220PF 10% 50V	
C738	1-162-286-21	CERAMIC 220PF 10% 50V	
C739	1-162-286-21	CERAMIC 220PF 10% 50V	
C740	1-162-286-21	CERAMIC 220PF 10% 50V	
C741	1-162-286-21	CERAMIC 220PF 10% 50V	
C742	1-162-286-21	CERAMIC 220PF 10% 50V	
C743	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C744	1-162-215-31	CERAMIC 47PF 5% 50V	
C745	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C746	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C747	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C748	1-126-177-11	ELECT 100uF 20% 10V	
C749	1-162-286-21	CERAMIC 220PF 10% 50V	
C750	1-102-948-00	CERAMIC 11PF 5% 50V	
C751	1-102-948-00	CERAMIC 11PF 5% 50V	
C752	1-126-301-11	ELECT 1uF 20% 50V	
C753	1-126-301-11	ELECT 1uF 20% 50V	
C754	1-124-261-00	ELECT 10uF 20% 50V	
C756	1-161-494-00	CERAMIC 0.022uF 25V	

# PANEL

Ref. No.	Part No.	Description	Remark
< CONNECTOR >			
* CN701	1-568-858-11	SOCKET, CONNECTOR 15P	
* CN702	1-568-858-11	SOCKET, CONNECTOR 15P	
* CN703	1-568-852-11	SOCKET, CONNECTOR 9P	(AEP, UK, G, IT, EE/N500:AEP2)
* CN703	1-568-850-11	SOCKET, CONNECTOR 7P	(CIS, E, AUS/N500:MX, AR, PX)
< DIODE >			
D701	8-719-987-63	DIODE 1N4148M	
D702	8-719-987-63	DIODE 1N4148M	
D703	8-719-987-63	DIODE 1N4148M	
D704	8-719-987-63	DIODE 1N4148M	(AEP, UK, EE, AUS/N500:AEP2, PX)
D705	8-719-987-63	DIODE 1N4148M	(G, IT, EE, E, AUS/N500:MX, AR, PX)
D706	8-719-987-63	DIODE 1N4148M	(CIS, E, AUS/N500:MX, AR, PX)
D707	8-719-987-63	DIODE 1N4148M (N600/N500:CIS)	
D708	8-719-987-63	DIODE 1N4148M	
< FILTER >			
FL701	1-517-380-11	INDICATOR TUBE, FLUORESCENT	
< IC >			
IC701	8-759-327-88	IC uPD78044AGF-068-3B9	
IC702	8-741-810-59	IC SBX1810-59	
< COIL >			
L701	1-410-521-11	INDUCTOR 100uH	
< TRANSISTOR >			
Q701	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q702	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q703	8-729-900-36	TRANSISTOR DTC124ES	
Q704	8-729-900-36	TRANSISTOR DTC124ES	
< RESISTOR >			
R701	1-247-807-31	CARBON 100 5% 1/4W	
R702	1-247-807-31	CARBON 100 5% 1/4W	
R703	1-247-807-31	CARBON 100 5% 1/4W	
R704	1-247-807-31	CARBON 100 5% 1/4W	
R709	1-249-417-11	CARBON 1K 5% 1/4W	
R710	1-249-417-11	CARBON 1K 5% 1/4W	
R711	1-249-433-11	CARBON 22K 5% 1/4W	
R712	1-249-433-11	CARBON 22K 5% 1/4W	
R713	1-249-429-11	CARBON 10K 5% 1/4W	
R714	1-249-429-11	CARBON 10K 5% 1/4W	

Ref. No.	Part No.	Description	Remark
R715	1-249-425-11	CARBON 4.7K 5% 1/4W	
R716	1-249-429-11	CARBON 10K 5% 1/4W	
R717	1-249-393-11	CARBON 10 5% 1/4W	
R718	1-249-423-11	CARBON 3.3K 5% 1/4W	
R719	1-247-807-31	CARBON 100 5% 1/4W	
R720	1-249-407-11	CARBON 150 5% 1/4W	
R721	1-249-409-11	CARBON 220 5% 1/4W	
R722	1-249-411-11	CARBON 330 5% 1/4W	
R723	1-249-413-11	CARBON 470 5% 1/4W	
R724	1-249-415-11	CARBON 680 5% 1/4W	
R725	1-249-417-11	CARBON 1K 5% 1/4W	
R726	1-249-419-11	CARBON 1.5K 5% 1/4W	
R727	1-249-421-11	CARBON 2.2K 5% 1/4W	
R728	1-249-423-11	CARBON 3.3K 5% 1/4W	
R729	1-249-425-11	CARBON 4.7K 5% 1/4W	
R730	1-249-429-11	CARBON 10K 5% 1/4W	
R731	1-249-433-11	CARBON 22K 5% 1/4W	
R732	1-249-423-11	CARBON 3.3K 5% 1/4W	
R733	1-247-807-31	CARBON 100 5% 1/4W	
R734	1-249-407-11	CARBON 150 5% 1/4W	
R735	1-249-409-11	CARBON 220 5% 1/4W	
R736	1-249-411-11	CARBON 330 5% 1/4W	
R737	1-249-413-11	CARBON 470 5% 1/4W	
R738	1-249-415-11	CARBON 680 5% 1/4W	
R739	1-249-417-11	CARBON 1K 5% 1/4W	
R740	1-249-419-11	CARBON 1.5K 5% 1/4W	
R741	1-249-421-11	CARBON 2.2K 5% 1/4W	
R742	1-249-423-11	CARBON 3.3K 5% 1/4W	
R746	1-249-417-11	CARBON 1K 5% 1/4W	
R747	1-249-423-11	CARBON 3.3K 5% 1/4W	
R748	1-249-441-11	CARBON 100K 5% 1/4W	
R749	1-249-441-11	CARBON 100K 5% 1/4W	
R750	1-249-441-11	CARBON 100K 5% 1/4W	
R751	1-249-441-11	CARBON 100K 5% 1/4W	
R752	1-249-441-11	CARBON 100K 5% 1/4W	
R753	1-249-441-11	CARBON 100K 5% 1/4W	
R754	1-249-441-11	CARBON 100K 5% 1/4W	
R755	1-249-441-11	CARBON 100K 5% 1/4W	
R756	1-249-441-11	CARBON 100K 5% 1/4W	
R757	1-249-441-11	CARBON 100K 5% 1/4W	
R758	1-249-441-11	CARBON 100K 5% 1/4W	
R759	1-249-441-11	CARBON 100K 5% 1/4W	
R761	1-249-417-11	CARBON 1K 5% 1/4W	
R762	1-249-421-11	CARBON 2.2K 5% 1/4W	
R763	1-249-417-11	CARBON 1K 5% 1/4W	
R764	1-249-417-11	CARBON 1K 5% 1/4W	
R765	1-249-417-11	CARBON 1K 5% 1/4W	
R766	1-249-429-11	CARBON 10K 5% 1/4W	
R767	1-249-429-11	CARBON 10K 5% 1/4W	



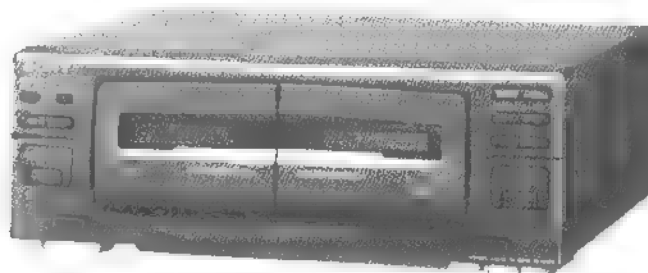
PANEL
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Ref. No.	Part No.	Description	Remark
R768	1-249-429-11	CARBON 10K 5% 1/4W	
R769	1-249-441-11	CARBON 100K 5% 1/4W	
R770	1-247-887-00	CARBON 220K 5% 1/4W (UK, EE, CIS, E, AUS/N500:AEP2, MX, AR, PX)	
< COMPOSITION CIRCUIT BLOCK >			
RB701	1-232-967-11	COMPOSITION CIRCUIT BLOCK	
< SWITCH >			
S701	1-554-303-21	SWITCH, TACTILE (DANCE/5)	
S702	1-554-303-21	SWITCH, TACTILE (EQ MEMORY)	
S703	1-554-303-21	SWITCH, TACTILE (CHARACTER)	
S704	1-554-303-21	SWITCH, TACTILE (ENTER/NEXT)	
S705	1-554-303-21	SWITCH, TACTILE (CURSOR CONTROL ▽ )	
S706	1-554-303-21	SWITCH, TACTILE (CURSOR CONTROL ◁ )	
S707	1-554-303-21	SWITCH, TACTILE (CURSOR CONTROL ▷ )	
S708	1-554-303-21	SWITCH, TACTILE (CURSOR CONTROL ▹ )	
S709	1-554-303-21	SWITCH, TACTILE (DISPLAY)	
S710	1-554-303-21	SWITCH, TACTILE (TUNING -)	
S711	1-554-303-21	SWITCH, TACTILE (TUNING MODE)	
S712	1-554-303-21	SWITCH, TACTILE (TUNING MEMORY)	
S713	1-554-303-21	SWITCH, TACTILE (TUNING +)	
S714	1-554-303-21	SWITCH, TACTILE (TUNER/BAND)	
S715	1-554-303-21	SWITCH, TACTILE (CLASSIC/4)	
S716	1-554-303-21	SWITCH, TACTILE (JAZZ/3)	
S717	1-554-303-21	SWITCH, TACTILE (POPS/2)	
S718	1-554-303-21	SWITCH, TACTILE (ROCK/1)	
S719	1-554-303-21	SWITCH, TACTILE (P-FILE)	
S720	1-554-303-21	SWITCH, TACTILE (TIMER SET)	
S721	1-554-303-21	SWITCH, TACTILE (CLOCK SET)	
S722	1-554-303-21	SWITCH, TACTILE (DAILY)	
S723	1-554-303-21	SWITCH, TACTILE (REC)	
S724	1-554-303-21	SWITCH, TACTILE (EON) (AEP, UK, G, IT, EE/N500:AEP2)	
S725	1-554-303-21	SWITCH, TACTILE (PTY) (AEP, UK, G, IT, EE/N500:AEP2)	
< VIBRATOR >			
X701	1-760-096-11	VIBRATOR, CRYSTAL (4.19MHz)	
*****			
MISCELLANEOUS			
*****			
3	1-769-544-11	WIRE (FLAT TYPE) (15 CORE)	
5	1-769-546-11	WIRE (FLAT TYPE) (7 CORE) (CIS, E, AUS/N500:MX, AR, PX)	
5	1-769-547-11	WIRE (FLAT TYPE) (9 CORE) (AEP, UK, G, IT, EE/N500:AEP2)	
6	1-769-545-11	WIRE (FLAT TYPE) (15 CORE)	

Ref. No.	Part No.	Description	Remark
ACCESSORIES ■ PACKING MATERIALS			
*****			
*	4-973-307-01	CUSHION (UPPER) (UK, EE, CIS, E, AUS/N500:MX, AR, PX)	
*	4-973-639-01	INDIVIDUAL CARTON (N500:AEP, AEP2, UK, G, IT)	
*	4-973-639-11	INDIVIDUAL CARTON (N600:AEP, UK, G, IT)	
*	4-973-650-01	CUSHION (LOWER) (UK, EE, CIS, E, AUS/N500:MX, AR, PX)	
*	4-973-868-01	CUSHION (AEP, G, IT/N500:AEP2)	


# TC-N500

## SERVICE MANUAL



*AEP Model  
UK Model  
E Model  
Australian Model  
PX Model*

TC-N500 are the Stereo Cassette Deck section in LBT-N500/N550/N550K/N550P and LBT-N600AV/N650AV.

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.  
"DOLBY" and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.

Model Name Using Similar Mechanism	HCD-A390
Tape Transport Mechanism Type	DECK A: TCM-190RA12AL DECK B: TCM-190RB53A

### SPECIFICATIONS

Recording system	4-track 2-channel stereo
Frequency response	DOLBY NR OFF With Sony Type II cassette 40 Hz to 14 kHz (±3dB) With Sony Type I cassette 40 Hz to 13 kHz (±3dB)
Wow and flutter	0.1% (W.RMS) ±0.2% (W.Peak)
Weight	Approx. 3.3 kg
Dimensions	Approx. 355 x 130 x 310 mm (w/h/d, including projections)

Design and specifications are subject to change without notice.



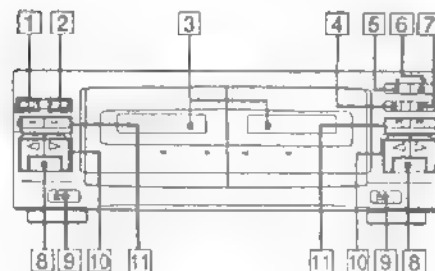
STEREO CASSETTE DECK  
**SONY**®

## SECTION 1 GENERAL

### TABLE OF CONTENTS

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This section is extracted from LBT-N500 instruction manual.



- 1 DOLBY NR switch (16)
- 2 DIRECTION MODE selector (16)
- 3 Cassette compartments (16)
- 4 II PAUSE button (16)
- 5 III-SPEED DUBBING button (20)
- 6 CD SYNCRO button (17, 19)
- 7 ● REC button (17)
- 8 ■ (stop) buttons (16)
- 9 △ EJECT buttons (16)
- 10 ▷ (front side play)
- ◁ (reverse side play) buttons (16, 17)
- 11 ◀◀ (fast leftward) AMS
- ▶▶ (fast rightward) AMS buttons (16)

### SERVICING NOTES

#### Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270°C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.



#### Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

#### Power Supply Used Servicing

This Unit does not have its own power supply. As it works on the power supplied from the amplifier (STR-N500/N600) used for this series, connect this amplifier when servicing the unit (conduction repair, etc.).

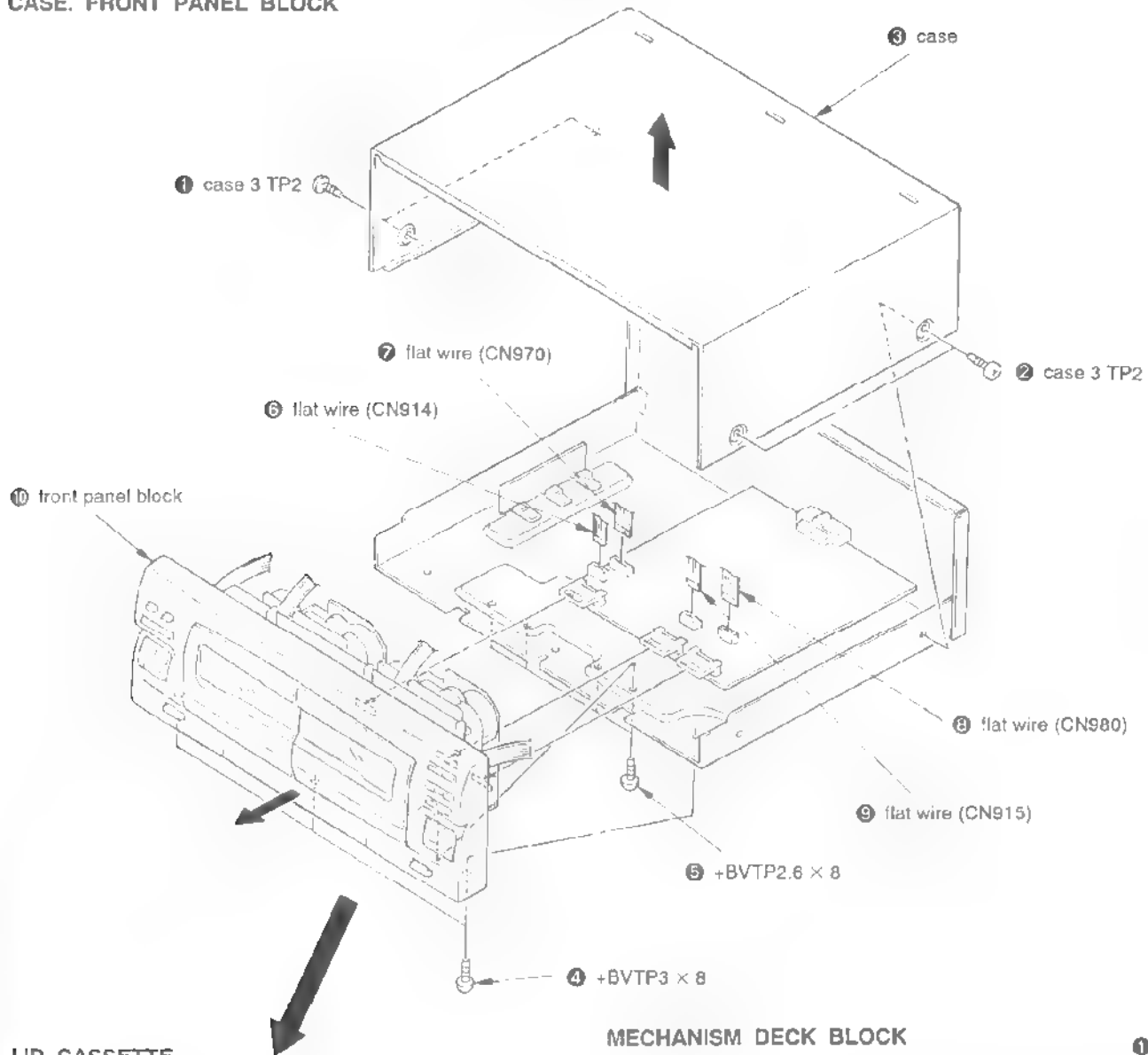
#### SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

## SECTION 2 DISASSEMBLY

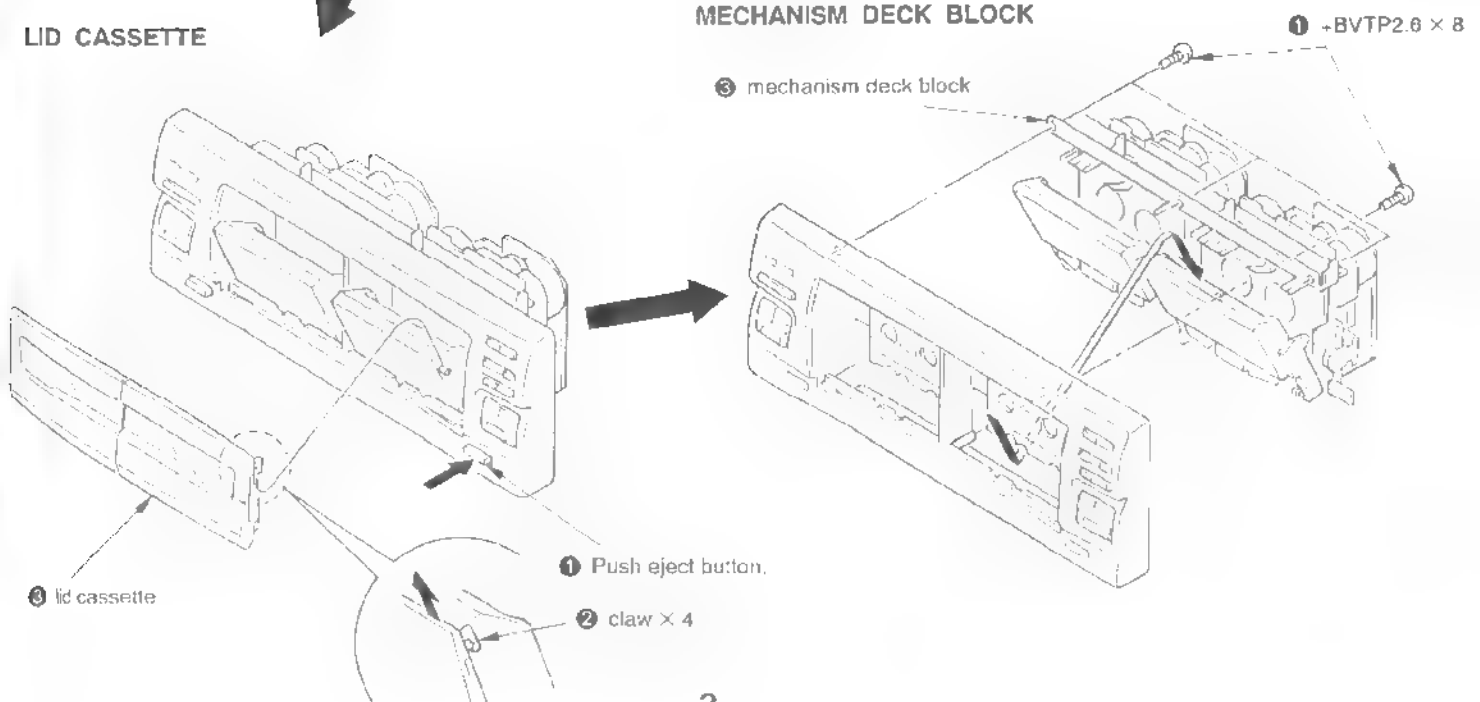
**Note:** Follow the disassembly procedure in the numerical order given.

### CASE. FRONT PANEL BLOCK



### LID CASSETTE

### MECHANISM DECK BLOCK





## SECTION 3 MECHANICAL ADJUSTMENTS

### PRECAUTIONS:

1. Clean the following parts with a denatured alcohol-moistened swab:
 

record/playback head	pinch roller
erase head	rubber belts
capstan	idler
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustment.
4. After the adjustment, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

### • Torque Measurement

Mode	Torque meter	Meter reading	
FWD	CQ-102C	30 to 65 g•cm (0.42 to 0.90 oz•inch)	
FWD Back tension		DECK A	1 to 6 g•cm (0.014 to 0.08 oz•inch)
		DECK B	2 to 9 g•cm (0.028 to 0.124 oz•inch)
REV	CQ-102RC	30 to 65 g•cm (0.42 to 0.90 oz•inch)	
REV Back tension		1 to 6 g•cm (0.014 to 0.08 oz•inch)	
FF, REW	CQ-201B	70 to 120 g•cm (0.98 to 1.66 oz•inch)	

## SECTION 4 ELECTRICAL ADJUSTMENTS

1. The adjustment should be performed in the publication.  
(Be sure to make playback adjustment at first.)
2. The adjustment and measurement should be performed for both L-CH and R-CH.
  - Switch position  
DOLBY NR switch : OFF

### • Test Tape

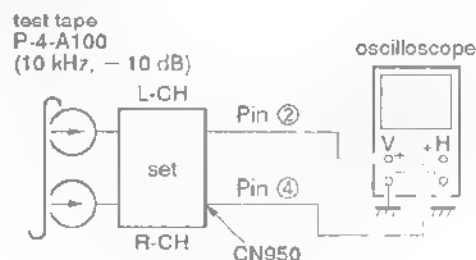
Tape	Contents	Used for
P-4-A100	10 kHz, -10 dB	Head Azimuth Adjustment
P-4-L300	315 Hz, 0 dB	Level Adjustment
WS-48B	3 kHz, 0 dB	Tape Speed Adjustment

$$0 \text{ dB} = 0.775 \text{ V}$$

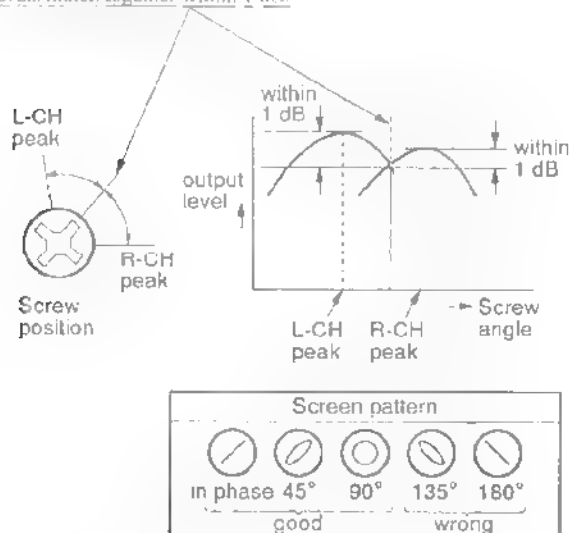
### Record/Playback Head Azimuth Adjustment DECK A DECK B

#### Procedure:

1. FWD/REV: Playback Mode

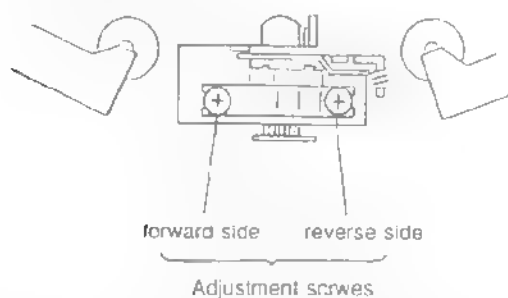


- Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1 dB.



- Change the REV playback mode and repeat the step 1 to 2.
- After the adjustments, lock the adjustment screw with suitable locking compound.

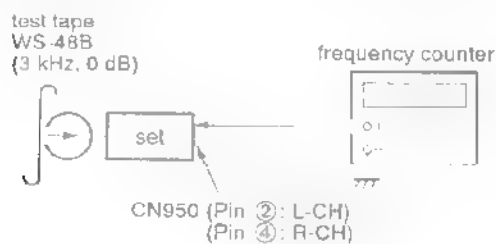
**Adjustment Location:**



## Tape Speed Adjustment **DECK A** **DECK B**

**Procedure:**

- Perform high speed adjustment before normal speed adjustment.
- Mode: playback



**(High Speed Adjustment)**

- Short-circuit CN902 (IC board) when the power off.
- Turn on the power, press the DUB switch, and set high speed playback.
- Set decks A and B into the FWD mode.
- Adjust deck A: RV72A (H) and deck B: RV72B (H) so that the reading of the frequency counter becomes the adjustment value.
- After adjusting, short-circuit CN902.

**(Normal Speed Adjustment)**

- Set the FWD playback mode.
- Adjust deck A: RV71A (N), deck B: RV71B (N) so that the reading of the frequency counter becomes the adjustment value.

**Adjustment Values:**

High Speed	$6,000 \pm 20 \text{ Hz}$
Normal Speed	$3,000 \pm 10 \text{ Hz}$

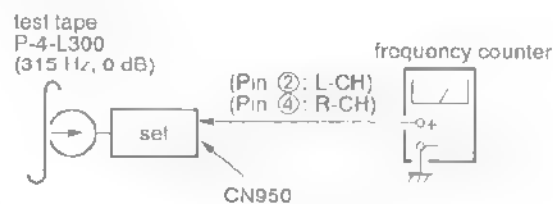
Adjust so that the difference between tape top and tape end is within 3%.  
Adjust so that the deviation between the speeds of deck A and deck B at the tape top is within 1.0%.

**Adjustment Location:** AUDIO (A), (B) boards

## Playback Level Adjustment **DECK A** **DECK B**

**Procedure:**

Mode: playback



Adjust deck A: RV11A (L-CH) and RV21A (R-CH), deck B: RV11B (L-CH) and RV21B (R-CH) so that within the adjustment values specified. The output level is within the adjustment values specified.

**Adjustable Level:**

CN950 level:  $-7.7 \text{ dB} \pm 0.5 \text{ dB}$  (0.30 to 0.34 V)

Level Difference between Channels: within 1.0 dB

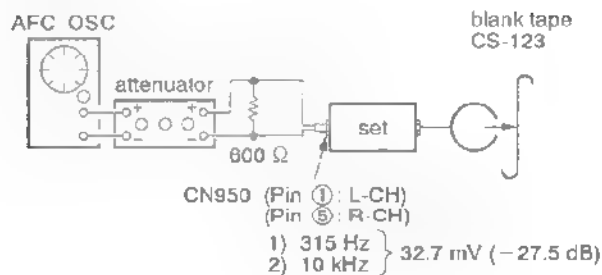
Confirm the level does not change in playback mode while changing the mode from playback to stop several time.

**Adjustment Location:** AUDIO (A), (B) boards

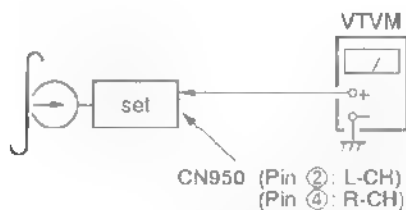
## Record BIAS Adjustment **DECK B**

### Procedure:

1. Mode: record



2. Mode: playback



Confirm playback the signal recorded in step 1 become adjustment level as follows.

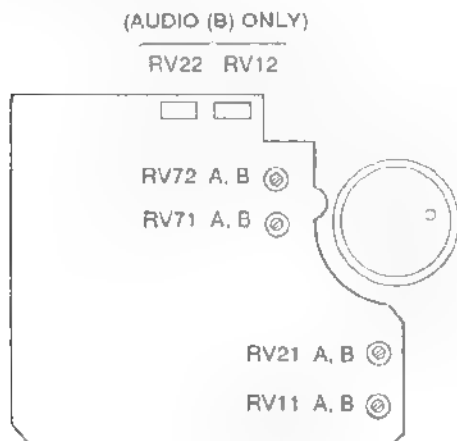
If these levels do not adjustment level, adjust the RV12 (L-CH) and RV22 (R-CH) to repeat step 1 and 2.

**Adjustment Level:** Playback output of 10 kHz to playback output of 315 Hz:  $\pm 0.5$  dB.

**Adjustment Location:** AUDIO (B) board

## Adjusting Parts Location:

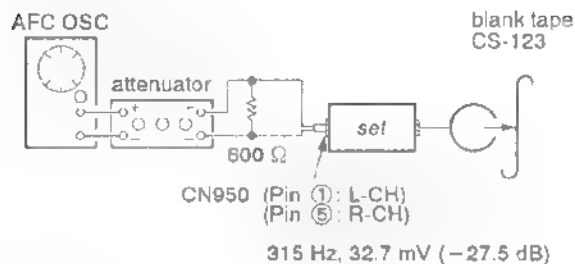
**[AUDIO (A), AUDIO (B) Board] – Conductor Side –**



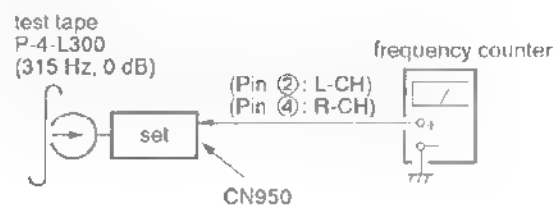
## Record Level Adjustments **DECK B**

### Procedure:

1. Mode: record



2. Mode: playback



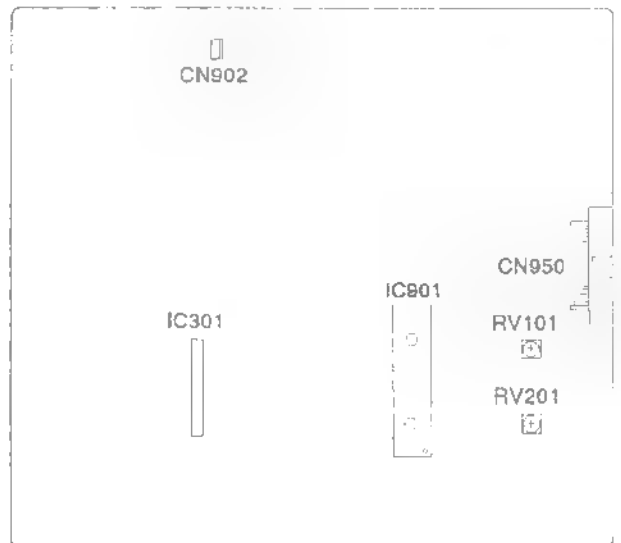
Confirm playback the signal recorded in step 1 become adjustment level as follows.

If these levels do not adjustment level, adjust the RV101 (L-CH) and RV201 (R-CH) to repeat step 1 and 2.

**Adjustment Level:**  
CN950 PB level:  $-27.5$  dB  $\pm 0.5$  dB (31 to 35 mV).

**Adjustment Location:** MAIN board

**[MAIN Board] – Component Side –**





## SECTION 5 DIAGRAMS

### 5-1. IC PIN FUNCTION DESCRIPTION

#### MAIN BOARD IC901 M50964-261FP (SYSTEM CONTROL)

Pin No.	Pin Name	I/O	Function																																				
1	G	—	} GND																																				
2	G	—																																					
3	G	—																																					
4	—	—	+5V																																				
5	NORM/HIGH	—	Tape speed "H"=High speed "L"=Normal speed																																				
6	B HALF	I	Deck B record prevention claw A, B detection input (Analog) <table><tr><td>Voltage (V)</td><td>1V</td><td>1.9V</td><td>2.8V</td><td>3.9V</td><td>5V</td></tr><tr><td>Half</td><td>ON</td><td>ON</td><td>ON</td><td>ON</td><td>OFF</td></tr><tr><td>E. PROOF A</td><td>OFF</td><td>ON</td><td>OFF</td><td>ON</td><td>OFF</td></tr><tr><td>E. PROOF B</td><td>ON</td><td>ON</td><td>OFF</td><td>OFF</td><td>OFF</td></tr></table>	Voltage (V)	1V	1.9V	2.8V	3.9V	5V	Half	ON	ON	ON	ON	OFF	E. PROOF A	OFF	ON	OFF	ON	OFF	E. PROOF B	ON	ON	OFF	OFF	OFF												
Voltage (V)	1V	1.9V	2.8V	3.9V	5V																																		
Half	ON	ON	ON	ON	OFF																																		
E. PROOF A	OFF	ON	OFF	ON	OFF																																		
E. PROOF B	ON	ON	OFF	OFF	OFF																																		
7	KEY Y	I	KEY input <table><tr><td>Voltage (V)</td><td>0</td><td>0.3</td><td>0.7</td><td>1.2</td><td>1.7</td><td>2.3</td><td>2.8</td><td>3.4</td><td>4.0</td><td>4.5</td><td>5.0</td></tr><tr><td>KEY Y</td><td>B ■</td><td>B ■</td><td>B ►</td><td>B ◄</td><td></td><td>A ◄◄</td><td>A ►►</td><td></td><td></td><td>RELAY</td><td>OFF</td></tr><tr><td>KEY X</td><td>A ■</td><td>A ►</td><td>A ◄</td><td>B ◄◄</td><td>B ►►</td><td>B ●</td><td>DUB</td><td></td><td>CD</td><td></td><td></td></tr></table>	Voltage (V)	0	0.3	0.7	1.2	1.7	2.3	2.8	3.4	4.0	4.5	5.0	KEY Y	B ■	B ■	B ►	B ◄		A ◄◄	A ►►			RELAY	OFF	KEY X	A ■	A ►	A ◄	B ◄◄	B ►►	B ●	DUB		CD		
Voltage (V)	0	0.3		0.7	1.2	1.7	2.3	2.8	3.4	4.0	4.5	5.0																											
KEY Y	B ■	B ■	B ►	B ◄		A ◄◄	A ►►			RELAY	OFF																												
KEY X	A ■	A ►	A ◄	B ◄◄	B ►►	B ●	DUB		CD																														
8	KEY X	I																																					
9	AMS IN	I	AMS signal input																																				
10	LM ON/OFF	O	Line mute output																																				
11	RM ON/OFF	O	Mute output																																				
12	RELAY ON/OFF	O	REC/PB change relay output																																				
13	REC/PB	O	Dolby IC REC/PB select output																																				
14	EQ70	O	Playback EQ output for playing deck (Not used)																																				
15	SEL A/B	O	Dolby IC PB input Deck A/B select output																																				
16	AMS MUTE	O	AMS mute output																																				
17	AU BUS	I	AUDIO BUS input																																				
18	BIAS ON/OFF	O	Bias oscillation output																																				
19	AUB OUT	O	AUDIO BUS output																																				
20	A BUS	I	AUDIO BUS normal input																																				
21	NC	—	Not used																																				
22	NC	—	} GND																																				
23	NC	—																																					
24	Vss	—																																					
25	RESET	I	Microcomputer reset input																																				
26	XIN	I	Clock input (4 MHz)																																				
27	XOUT	O	Clock output (4 MHz)																																				
28	φ	O	Not used (open)																																				
29	Vss	—	} GND																																				
30	PW IN	I																																					
31	A STOP	I	Deck A STOP switch input																																				
32	A HALF	I	Deck A Half switch input																																				
33	A SHUT	I	Deck A Reel table signal input																																				
34	A70 U	I	GND																																				
35	B STOP	I	Deck B STOP switch input																																				

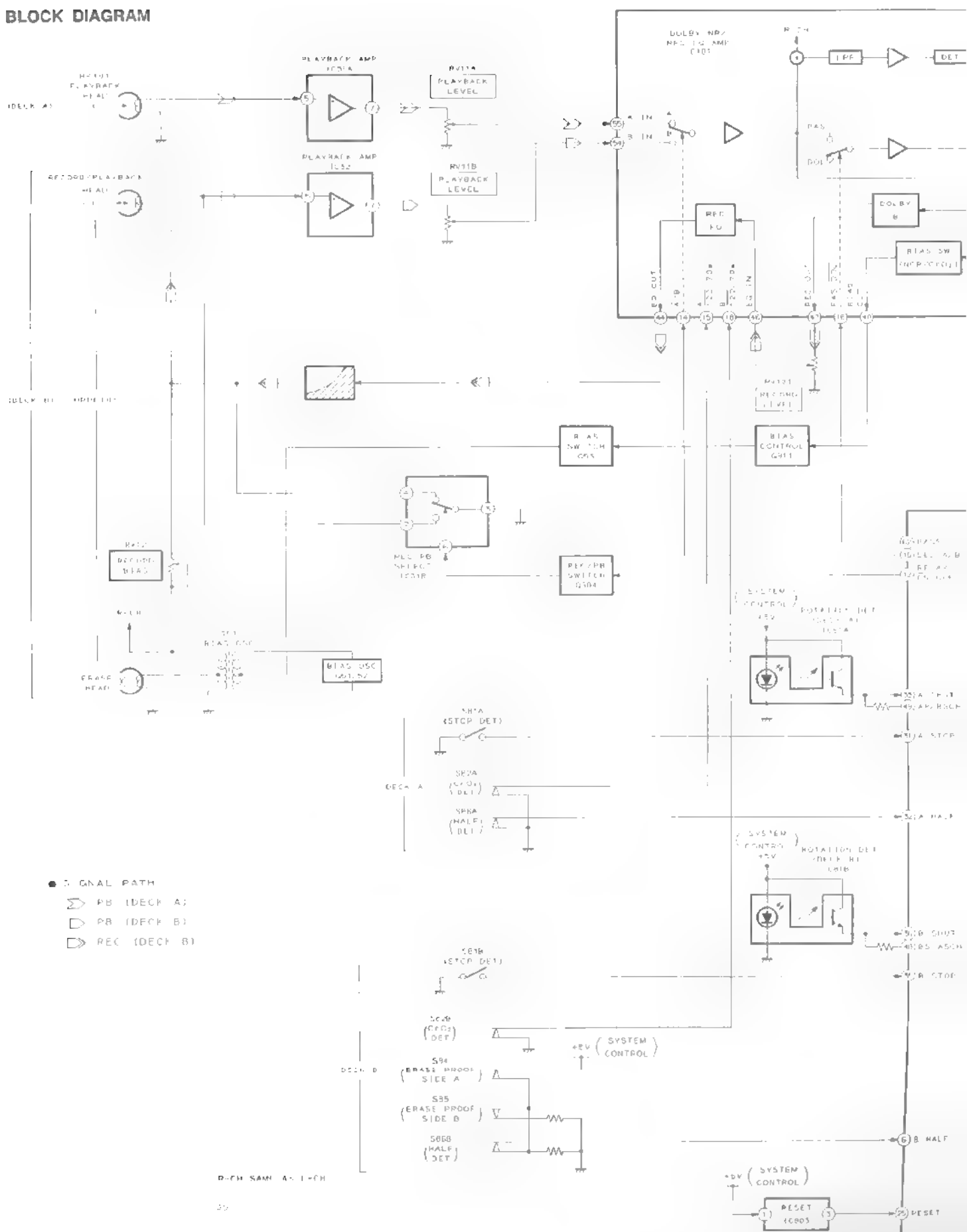
Pin No.	Pin Name	I/O	Function
36	B SHUT	I	Deck ■ Reel table signal input
37	B70 U	I	+5V
38	NC	—	Not used
39	ARM 3	O	Deck A Reel Motor control out
40	ARM 2	O	
41	ARM 1	O	
42	BRM 3	O	Deck B Reel Motor control out
43	BRM 2	O	
44	BRM 1	O	
45	H/L	O	Capstan motor speed select
46	A CM	O	A Capstan motor ON/OFF
47	B CM	O	B Capstan motor ON/OFF
48	BS/ASCH	I	Deck B Reel table/BS signal input
49	AP/BSCH	I	Deck A Reel table/AP signal input
50	A REV	O	Deck A RVS LED output
51	A FWD	O	Deck A FWD LED output
52	A PLAY	O	Deck B RVS/FWD LED control output (Not used)
53	DUB H	O	High Speed Dubbing LED output
54	DUB N	O	Normal Speed Dubbing LED output (Not used)
55	NC	—	Not used
56	CD SYNC	O	Auto CD Synchro LED output
57	B REV	O	Deck B RVS LED output
58	B FWD	O	Deck B FWD LED output
59	B PLAY	O	Deck ■ RVS/FWD LED control output (Not used)
60	B PAUSE	O	Deck B PAUSE LED output
61	B REC	O	Deck B REC LED output
62	PASS	O	PASS amplifier switch output
63	TEST	I	Electrical adjustment test mode setting
64	NC	—	+5 V
65	Vss	—	GND
66	NC	—	Not used
67	Vcc	—	POWER 5 ± 0.5V
68	AVss	—	Analog system GND
69	VREF	I	Analog system reference voltage input
70	DAC	—	GND
71	—	—	
72	—	—	

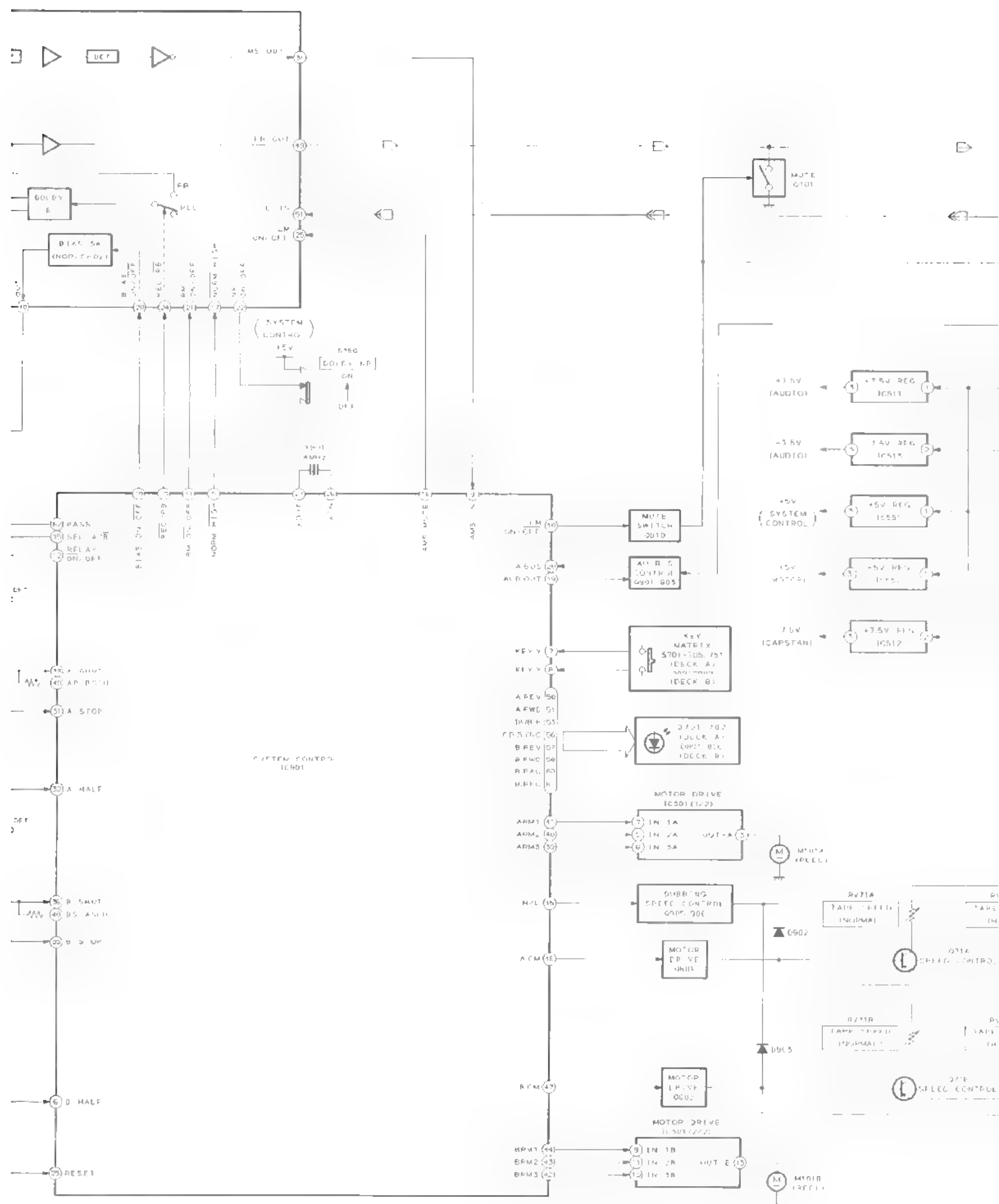
#### [TEST MODE]

When making pin ⑥ low (connect pin ① of CN902 to ground with jumper wire), following function operates.

1. Source monitor  
Release the line mute while recording.

## 5-2. BLOCK DIAGRAM









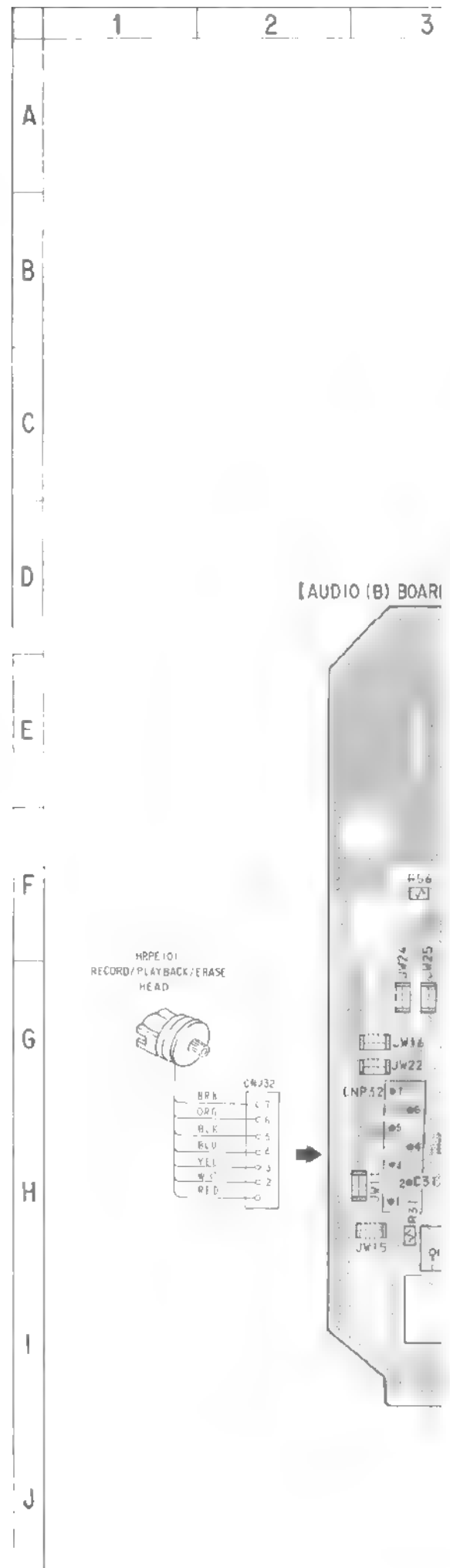
### 5-3. PRINTED WIRING BOARDS

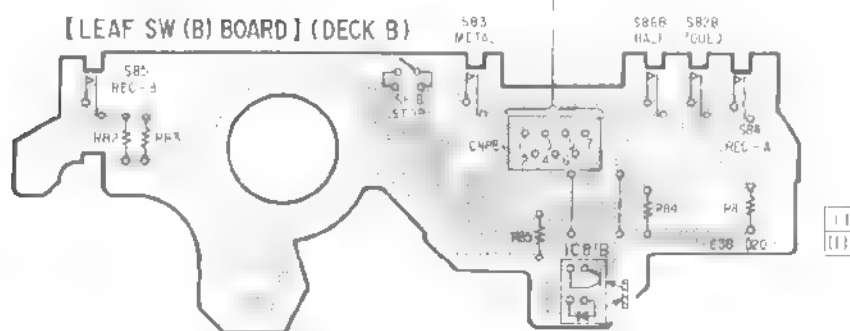
- **Semiconductor Location**

Ref. No.	Location
D501	G-27
D502	G-27
D503	G-27
D504	G-27
D582	H-26
D584	H-26
D586	I-25
D701	H-10
D702	H-11
D801	C-10
D802	C-11
D803	D-10
D804	D-11
D805	B-10
D806	B-10
D901	G-23
D902	H-20
D903	D-22
D904	H-27
D905	H-27
D911	F-26
D912	F-26
IC31A	G-15
IC31B	G-3
IC32	G-5
IC81A	C-16
IC81B	C-6
IC101	D-25
IC301	D-22
IC511	G-26
IC512	J-25
IC513	H-25
IC551	J-28
IC552	J-26
IC901	H-22
IC903	G-23
Q51	F-5
Q52	E-5
Q53	F-4
Q71A	G-16
Q818	G-6
Q101	B-26
Q201	B-27
Q601	F-22
Q602	E-22
Q901	G-23
Q902	F-23
Q903	G-23
Q904	H-23
Q905	E-22
Q906	E-22
Q910	G-23
Q911	C-22

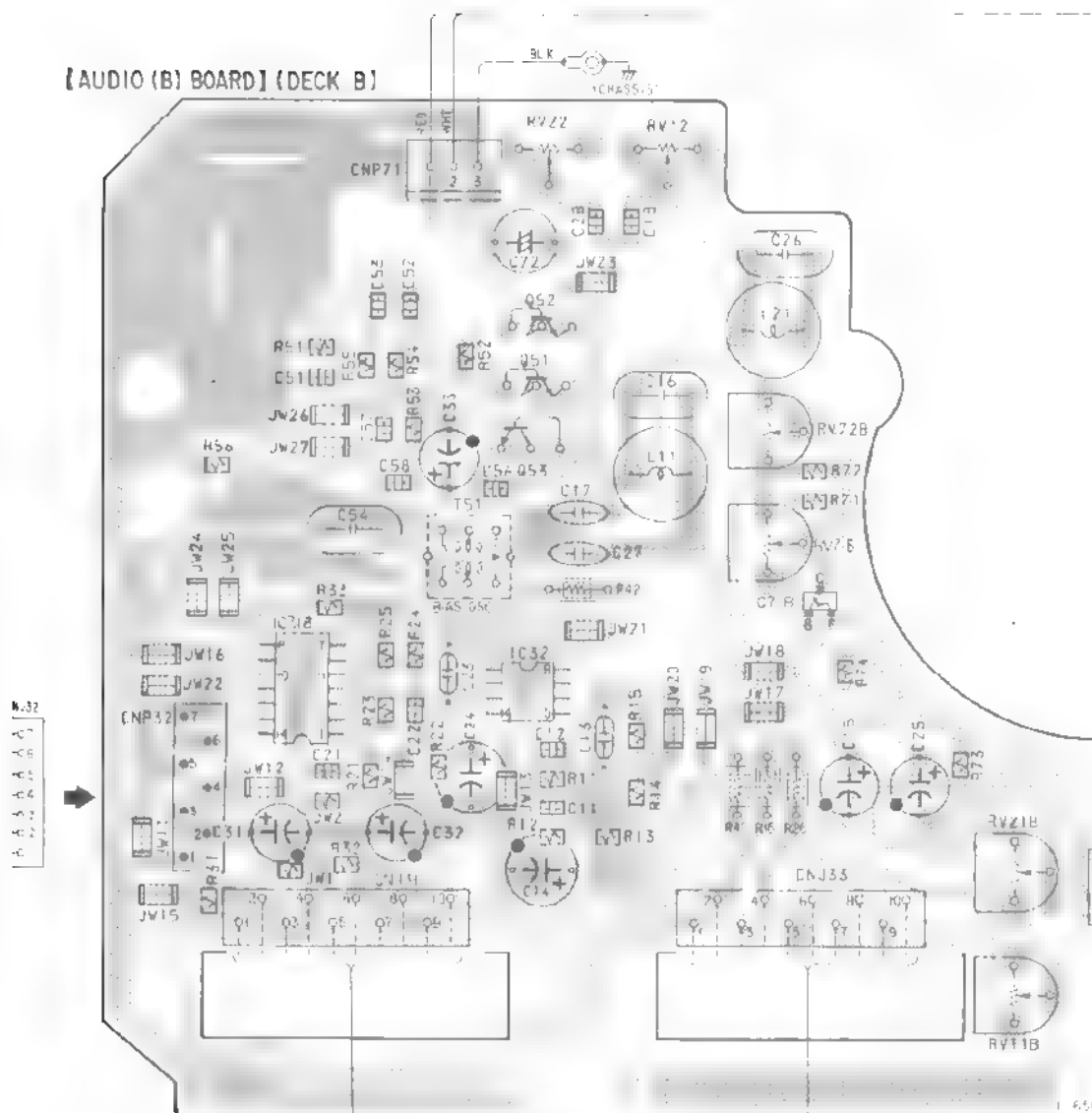
**Note:**

- — : parts extracted from the component side.
- — ○ : Jumper wire connected to the ground pattern on the component side.
- △ : internal component.



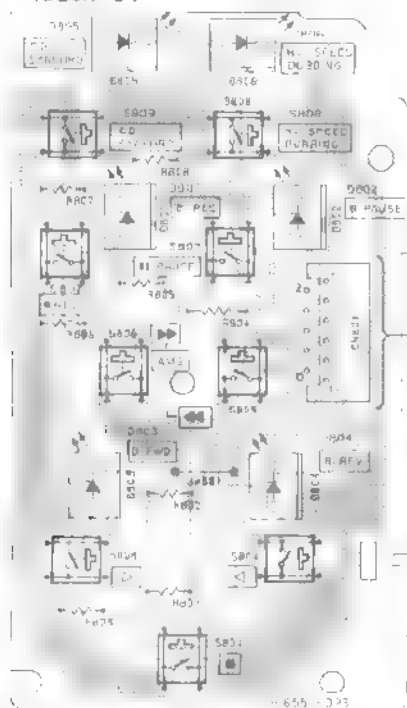


**[ AUDIO (B) BOARD ] (DECK B)**





【PANEL (B) BOARD】  
(DECK B)



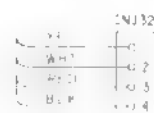
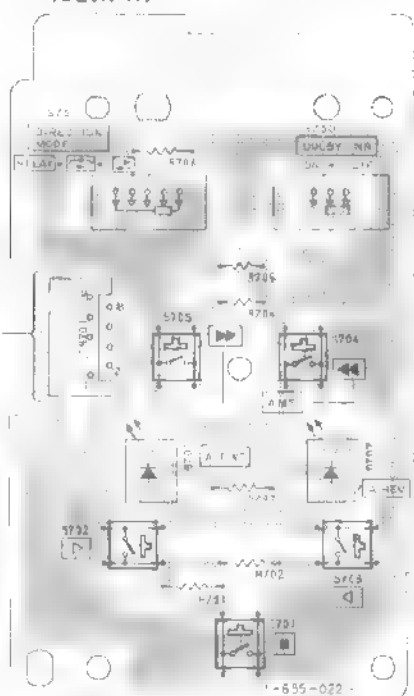
【LEAF SW (A)】



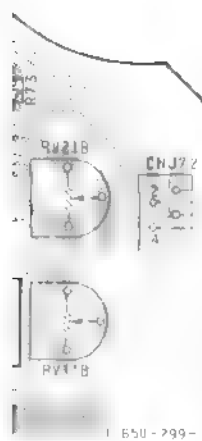
【AUDIO (A) BOARD】  
(DECK A)



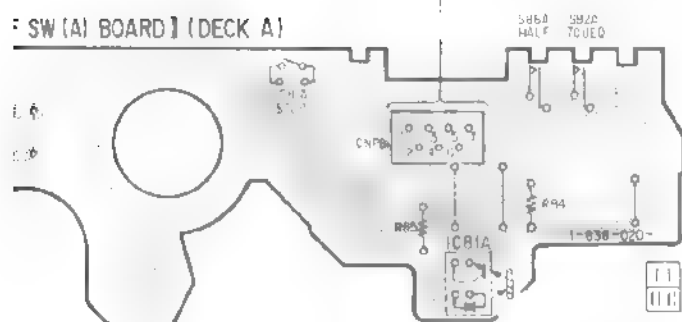
【PANEL (A) BOARD】  
(DECK A)



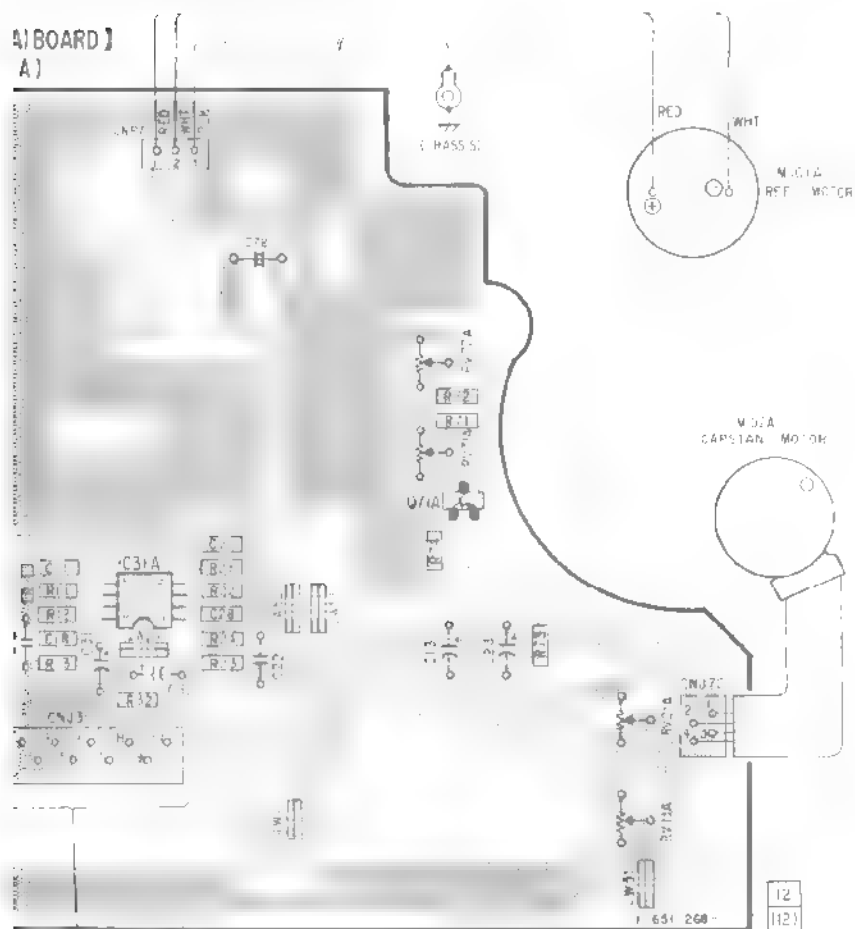
MDC E  
(CAPSTAN MOTOR)



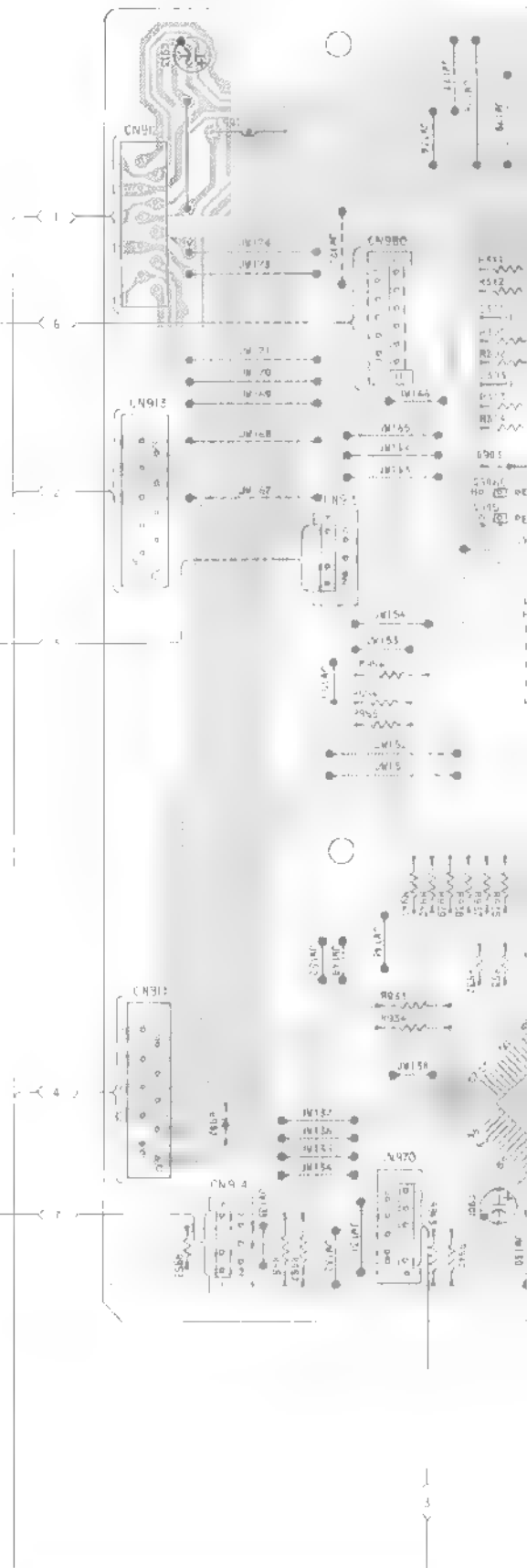
# SW (A) BOARD (DECK A)

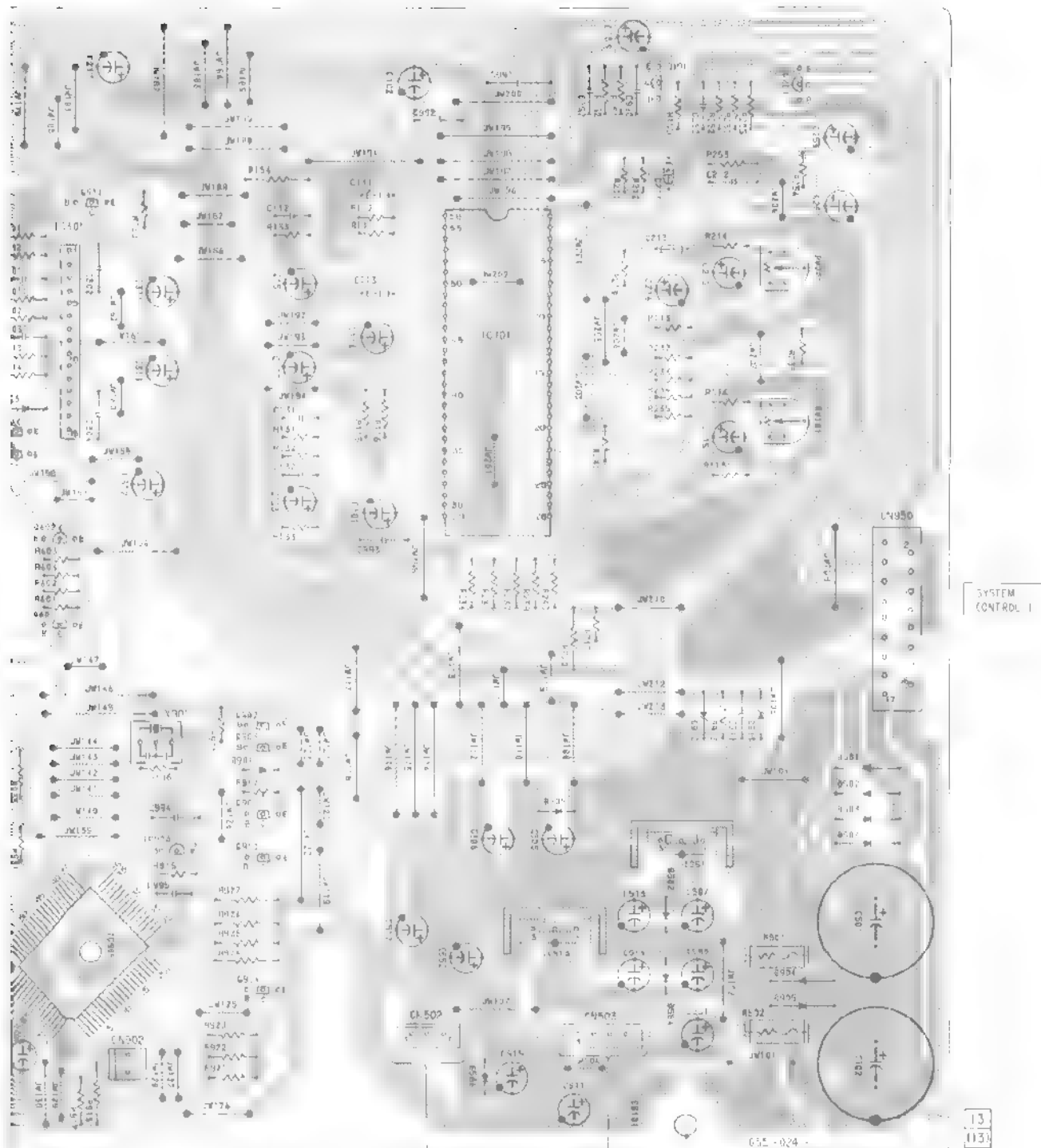


# A) BOARD A)

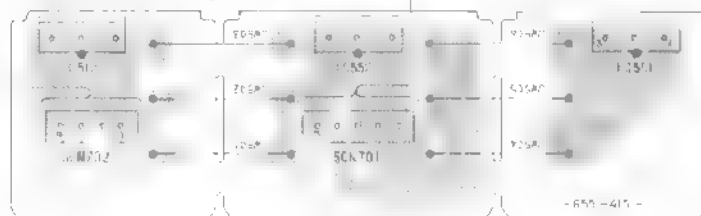


# MAIN BOARD



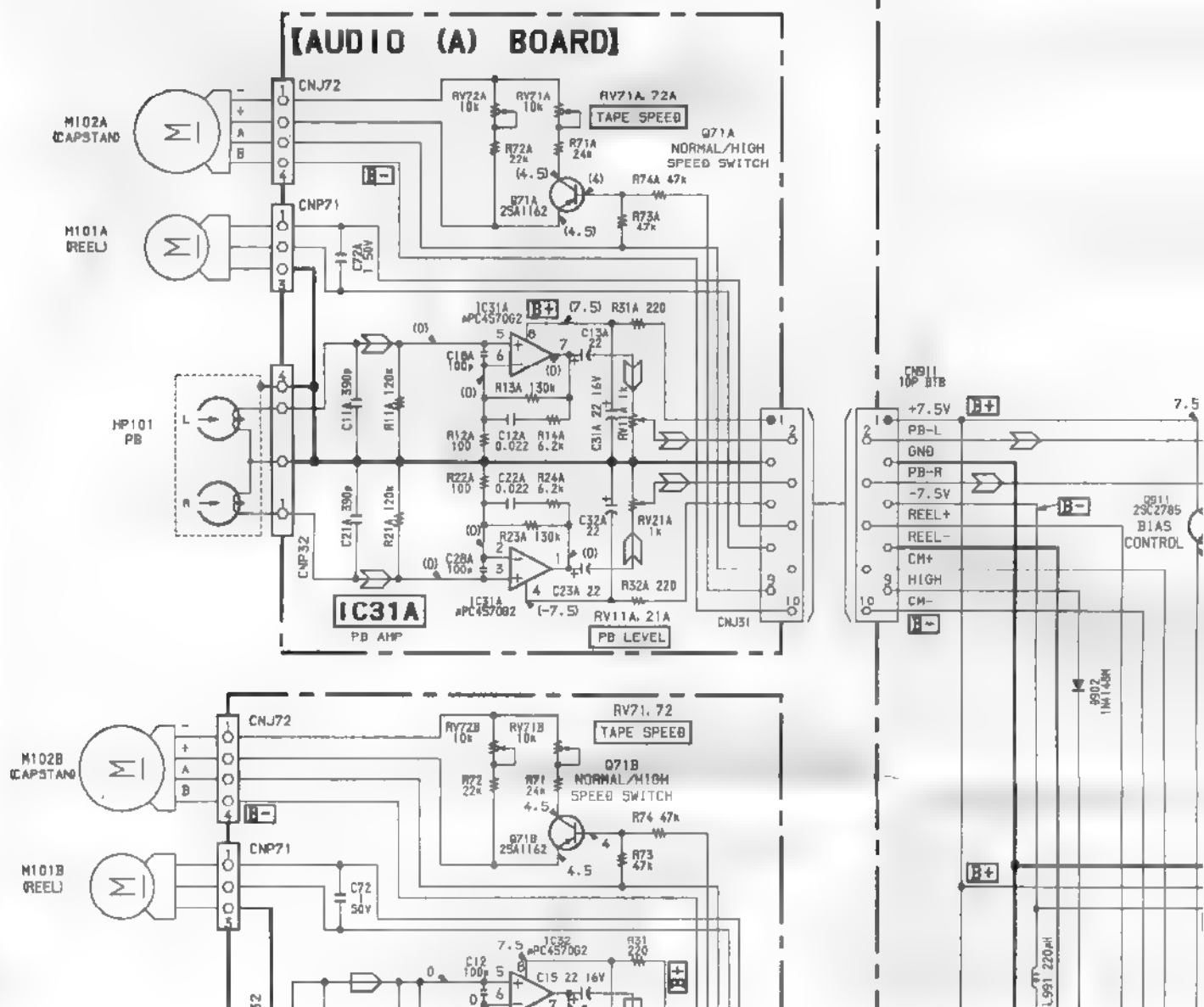


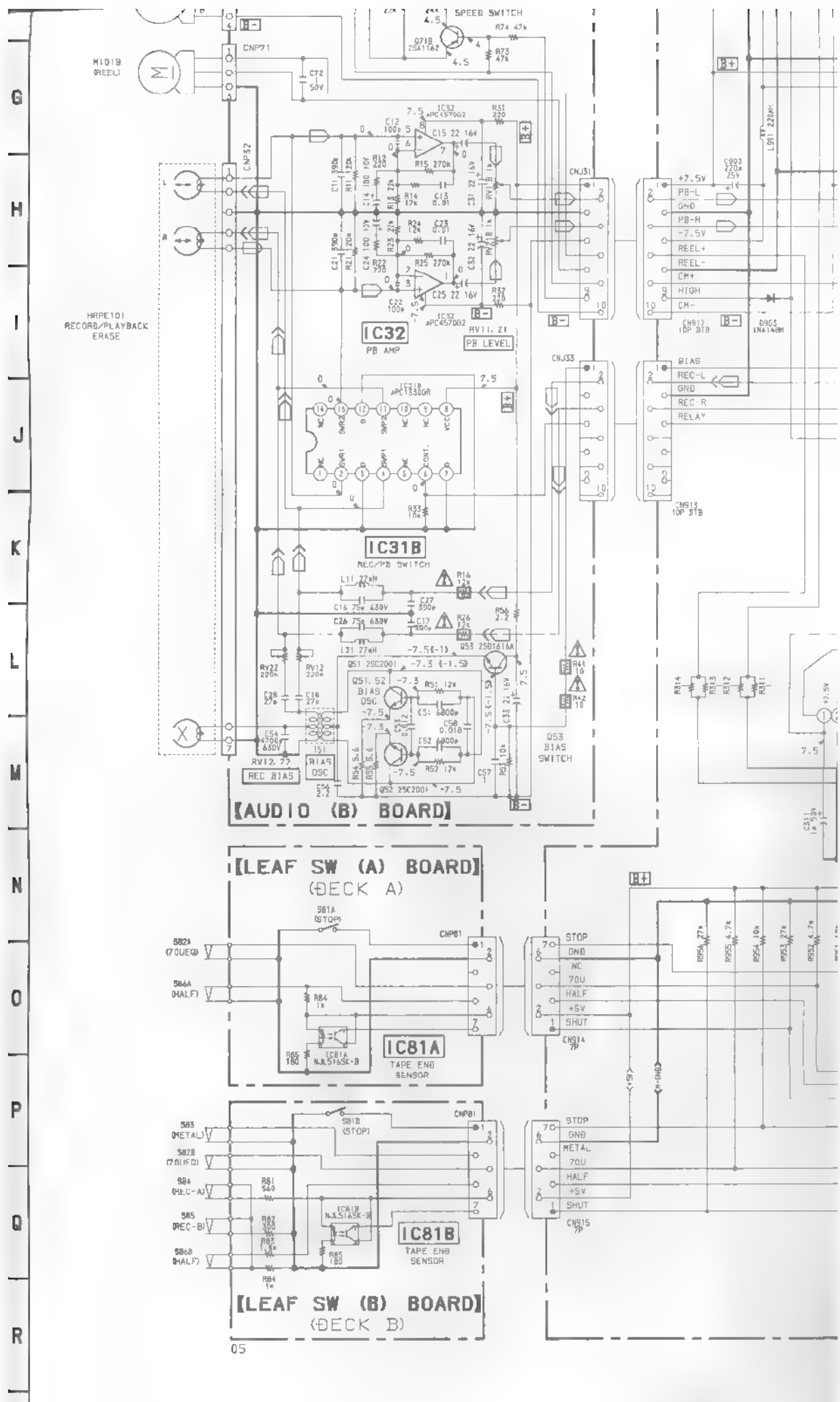
# [POWER 1 BOARD]



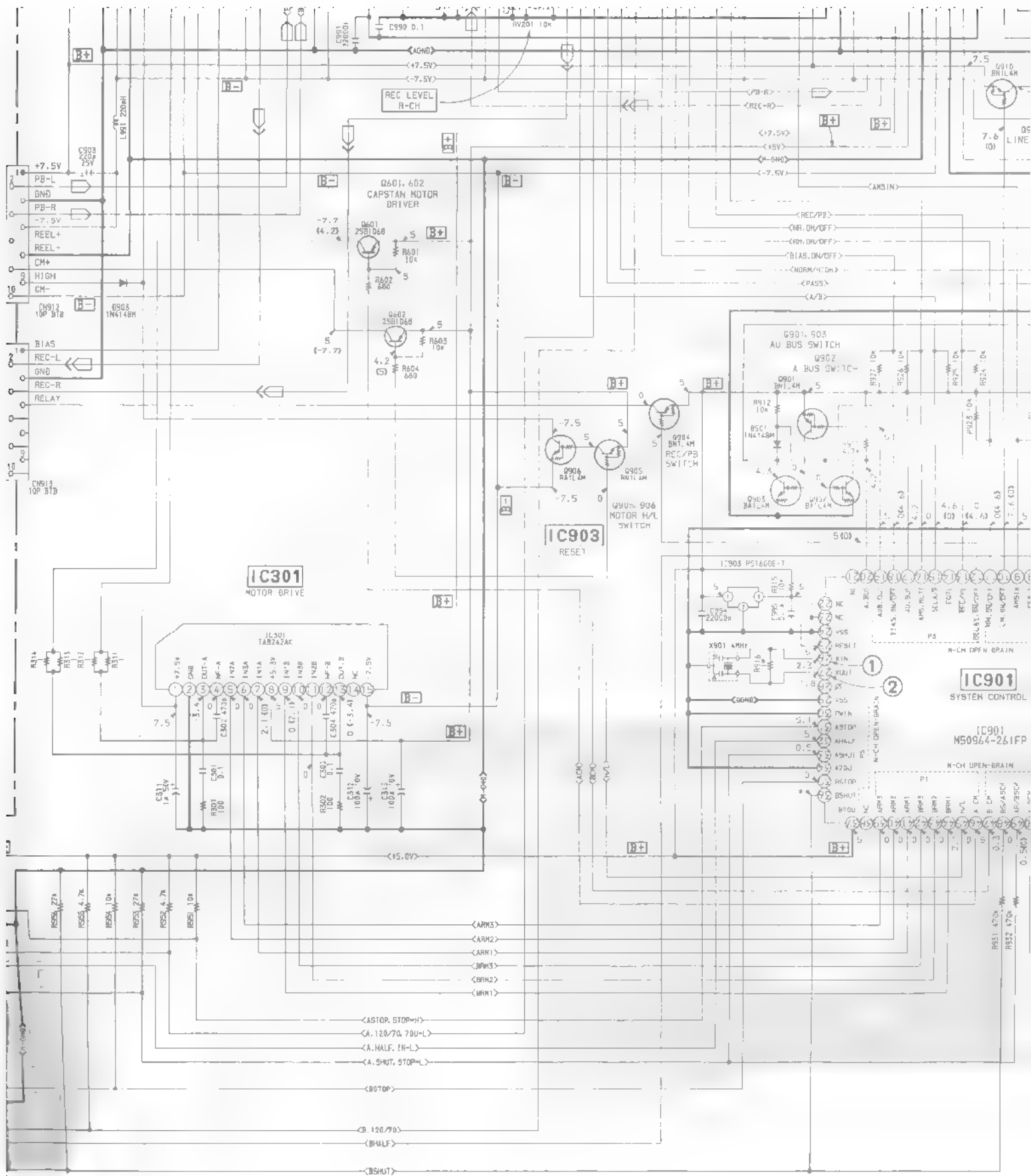


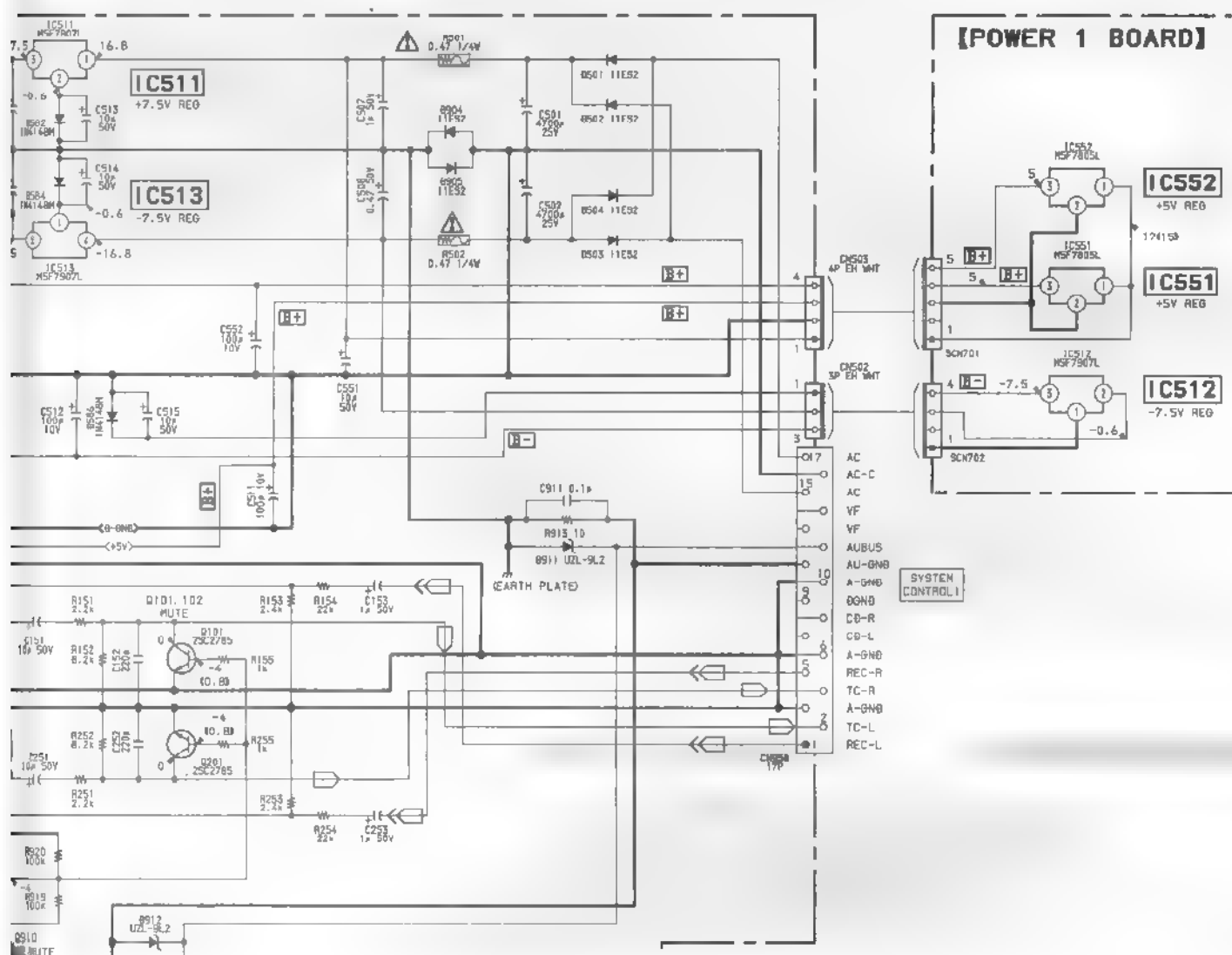
1	2	3	4	5	6	7	8
---	---	---	---	---	---	---	---

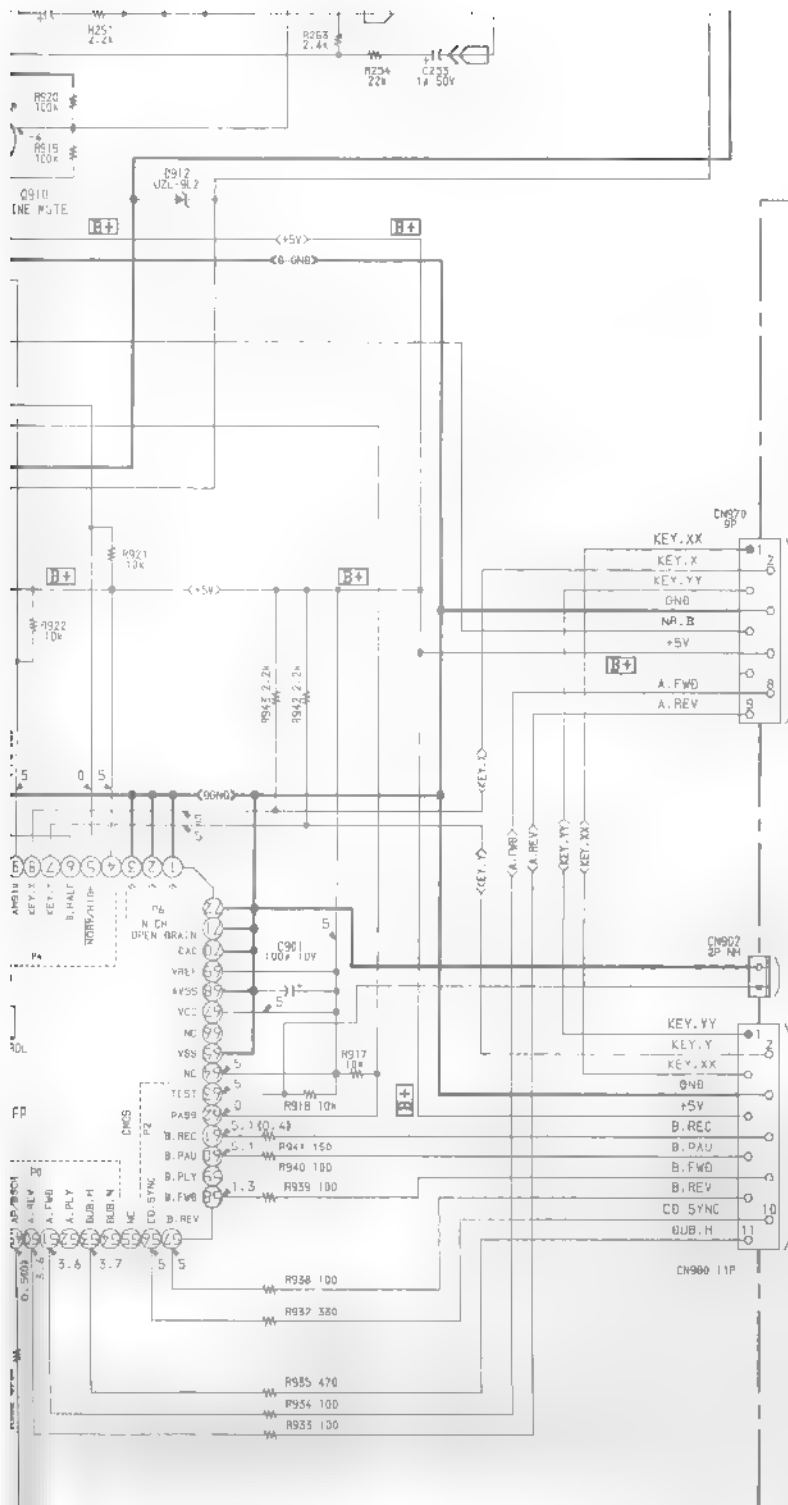




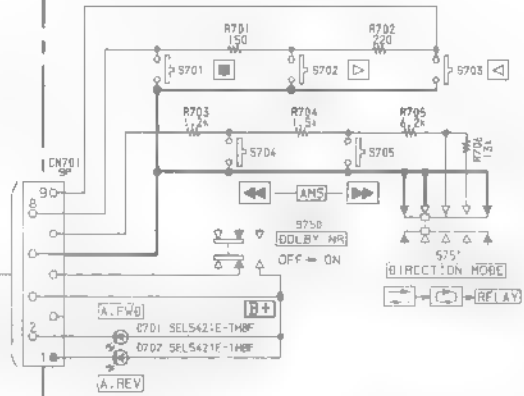








## [PANEL (A) BOARD]



## [PANEL (B) BOARD]



### NOTE

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF} = \mu\text{F} \times 10^{-6}$ .  $\text{SOW}$  or less are not indicated except for electrolytics and tantalums.
- : nonflammable resistor.
- : internal component.
- : panel designation.

Note: The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

- Signal path.
- : PB (DECK A)
- : PB (DECK B)
- : REC (DECK B)

- : B+ Line.
- : B- Line.
- : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
- no mark: PLAY (DECK A)
- ( ) : PLAY (DECK B)
- ( ) : REC (DECK B)
- \* : can not be measured.
- Voltages are taken with a VOM (input impedance  $10\text{M}\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- AC voltage readings in the bias oscillator with a VTVM.



## B



D

E

**F**

G

## ① IC901 ②

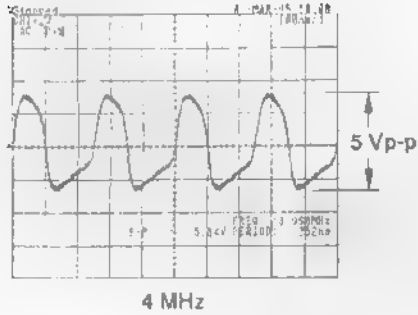
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## ② IC901 ⑦

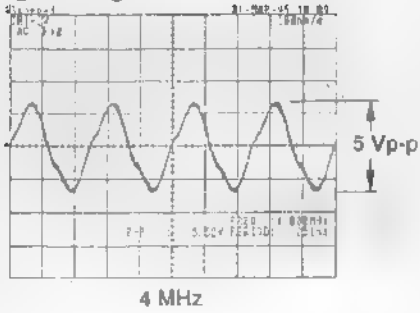
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• Waveforms  
(MAIN BOARD)

① IC901 ②

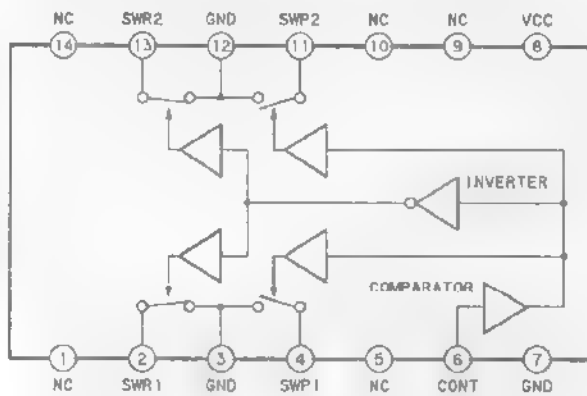


② IC901 ②

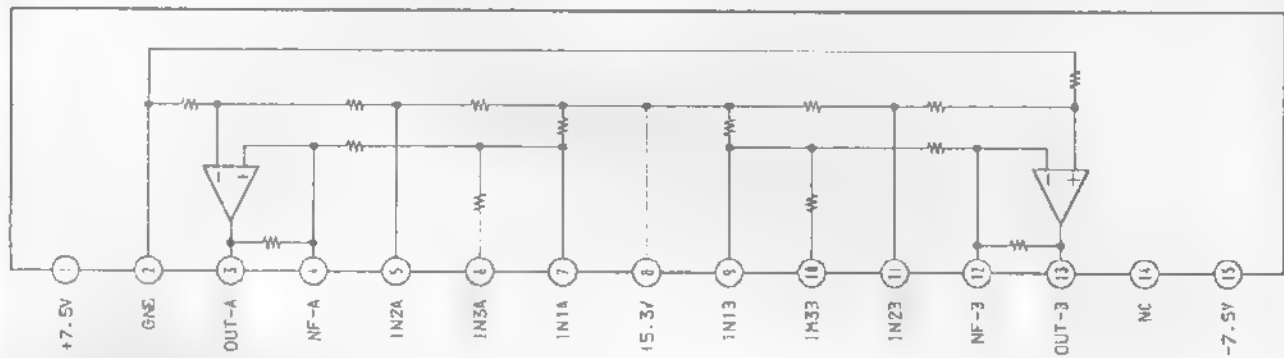


• IC Block Diagrams

IC31B  $\mu$  PC1330GR (AUDIO (B) BOARD)



IC301 TA8242AK (MAIN BOARD)



## SECTION 6

### EXPLODED VIEWS

#### NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.

- Color Indication of Appearance Parts  
Example:

Knob, Balance (WHITE) ... (RED)

↑
↑  
 Parts Color    Cabinet's Color

- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

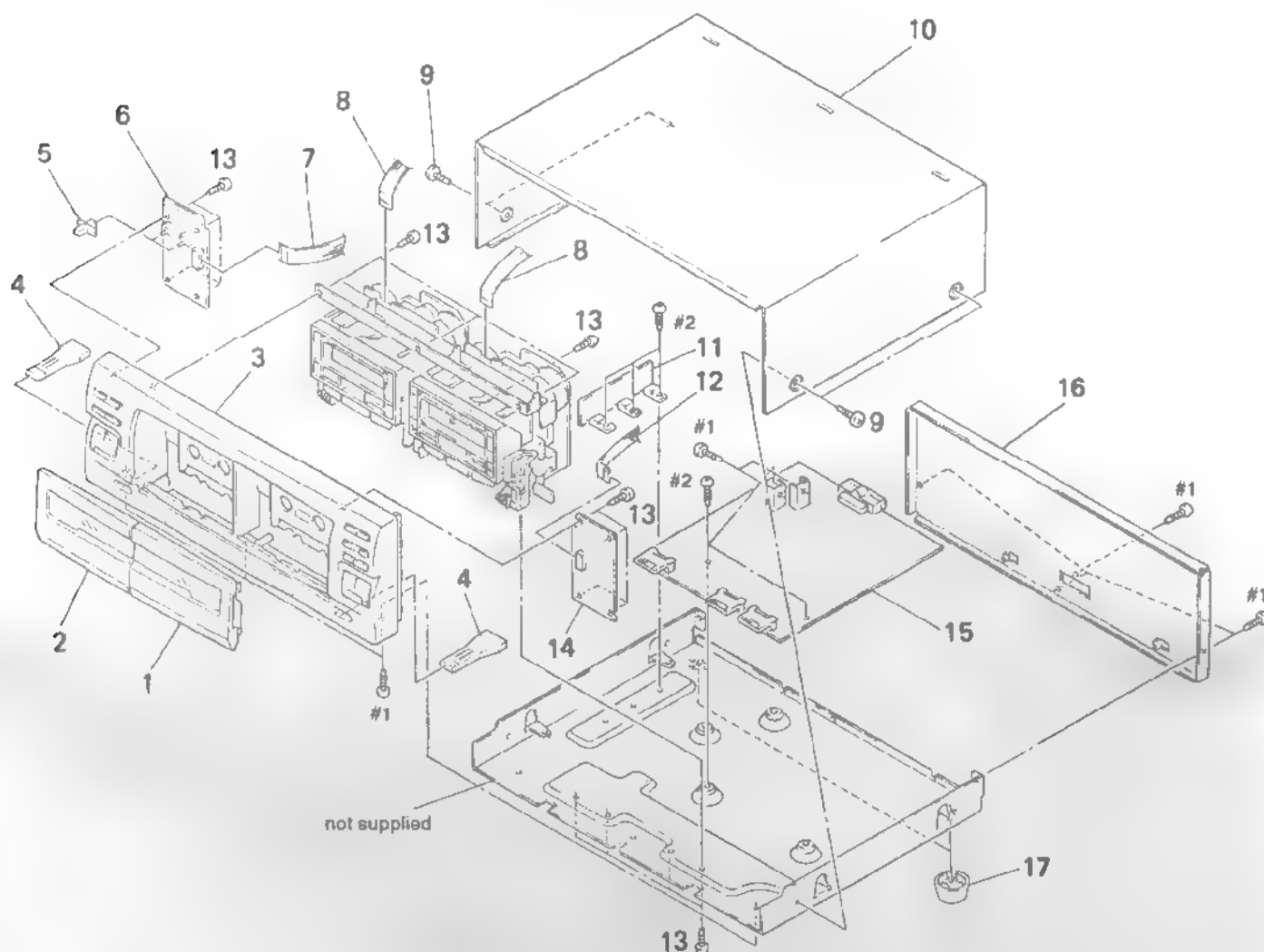
- The mechanical parts with no reference number in the exploded views are not supplied.

- Hardware (# mark) list and accessories and packing materials are given in the last of the electrical parts list.

#### • Abbreviation

IT : Italian  
 G : German  
 AR : Argentine  
 SP : Singapore  
 MY : Malaysia  
 EE : East European  
 AU : Australian  
 EA : Saudi Arabia  
 MX : Mexican

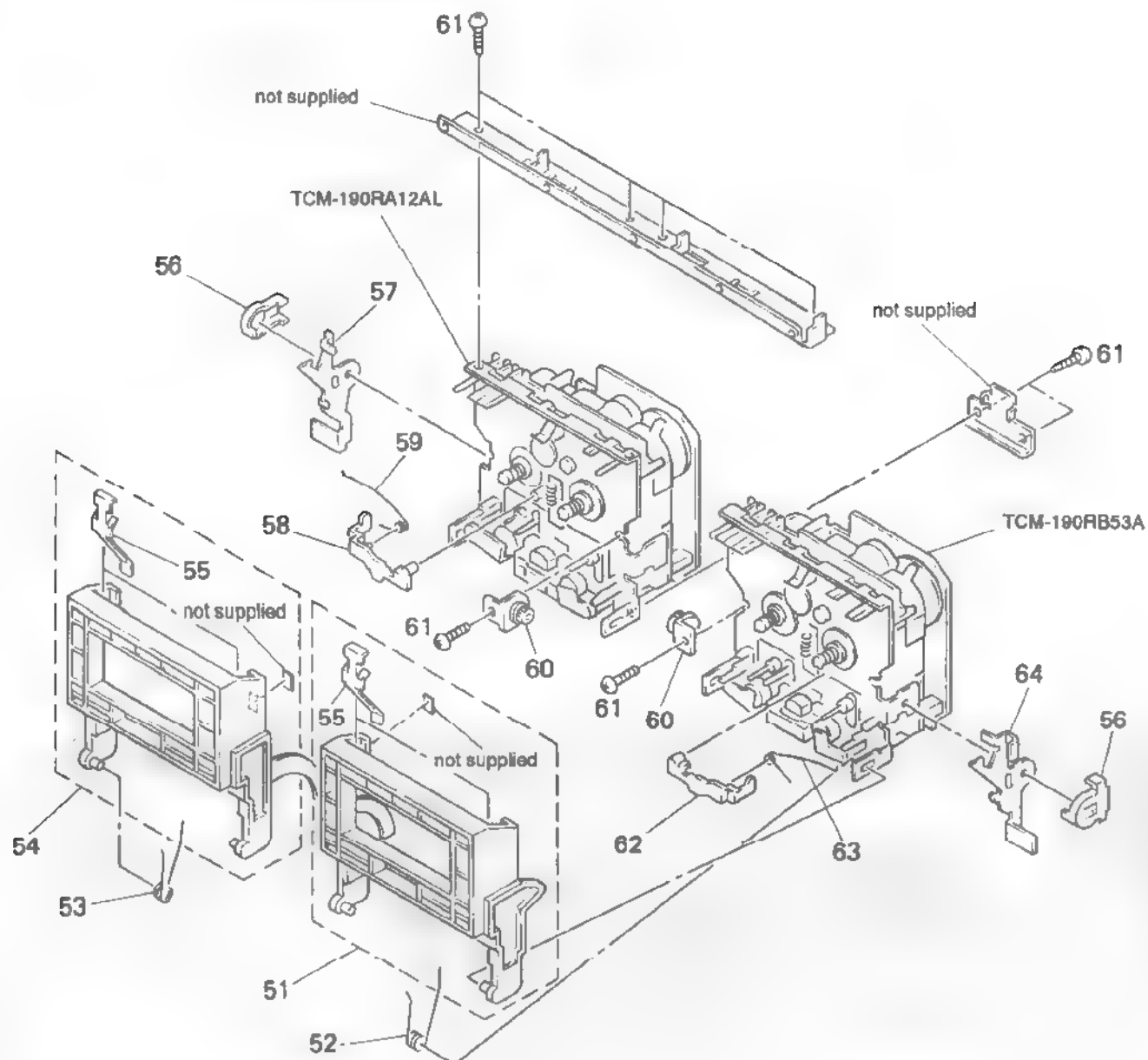
#### (1) CHASSIS SECTION



Ref. No.	Part No.	Description	Remark
1	X-3369-643-1	LID (B DECK) ASSY, CASSETTE	
2	X-3369-642-1	LID (A DECK) ASSY, CASSETTE	
3	X-3369-668-1	PANEL ASSY, FRONT	
4	3-918-281-01	BUTTON (EJECT)	
5	4-962-707-01	KNOB, SLIDE	
* 6	1-655-022-13	PANEL (A) BOARD	
7	1-769-664-11	WIRE (FLAT TYPE) (9 CORE)	
8	1-590-574-11	WIRE, FLAT TYPE (7 CORE)	
9	3-363-099-01	SCREW (CASE 3 TP2)	
10	4-969-778-31	CASE	

Ref. No.	Part No.	Description	Remark
* 11	1-655-415-13	POWER 1 BOARD	
12	1-590-488-11	WIRE, FLAT TYPE (11 CORE)	
13	4-951-620-01	SCREW (2.6X8), +BVP	
* 14	1-655-023-13	PANEL (B) BOARD	
* 15	A-2007-332-A	MAIN BOARD, COMPLETE	
* 16	3-918-326-01	PANEL, BACK (AEP, UK, IT, G)	
* 16	3-918-326-11	PANEL, BACK (E, AR, SP, MY, EE)	
* 16	3-918-326-21	PANEL, BACK (AU, EA, PX, MX)	
17	X-4941-228-1	FOOT ASSY	

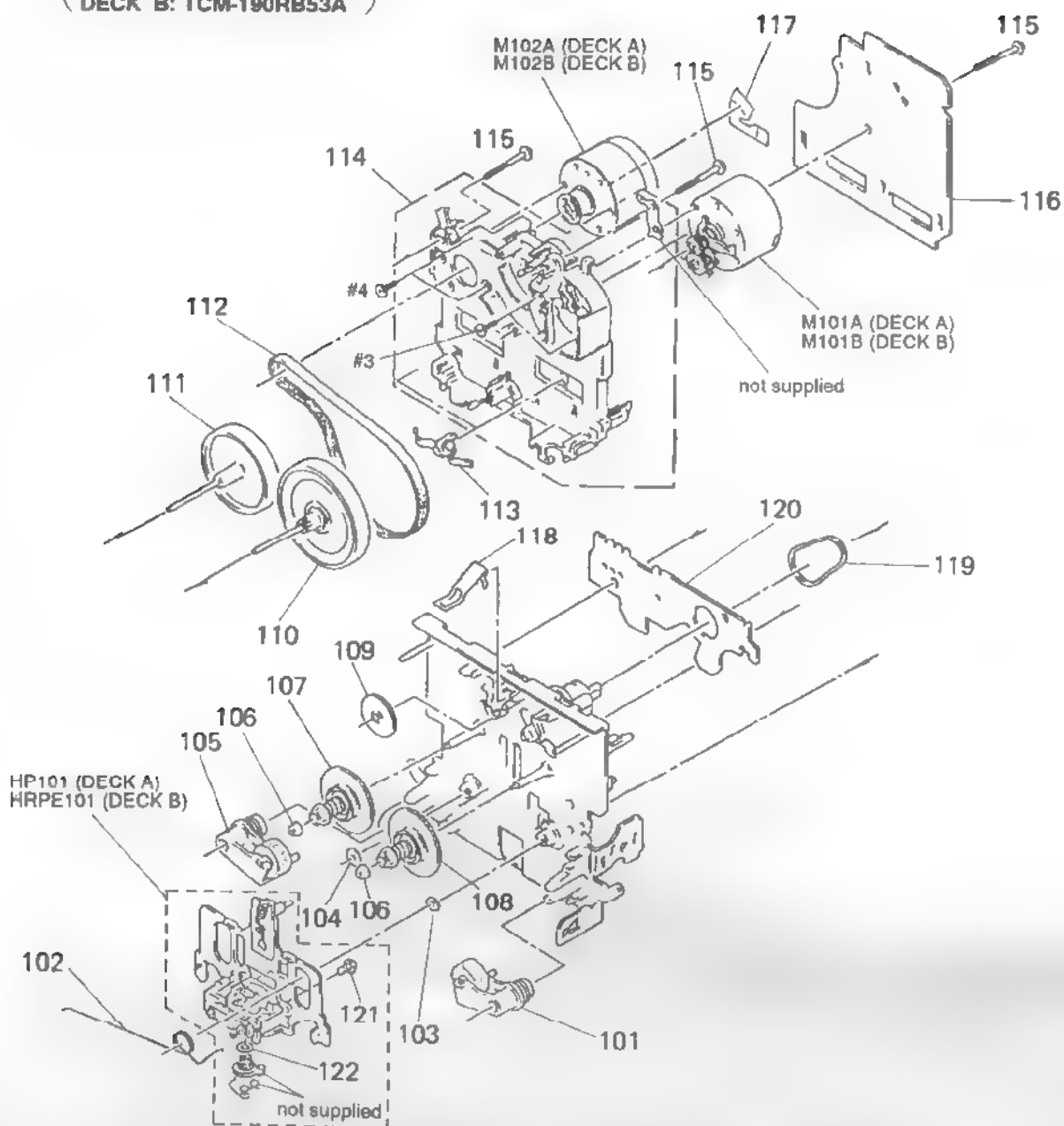
## (2) MECHANISM DECK CHASSIS SECTION



Ref. No.	Part No.	Description	Remark
51	A-4325-164-A	HOLDER (R) ASSY, CASSETTE	
52	3-354-960-01	SPRING (LOADING R), TORSION	
53	3-354-959-01	SPRING (LOADING L), TORSION	
54	A-4325-163-A	HOLDER (L) ASSY, CASSETTE	
55	3-308-823-11	DETENT, CASSETTE	
■	3-354-957-01	JOINT (LOCK LEVER)	
♦ 57	3-354-953-01	LEVER (LOCK LEVER L)	

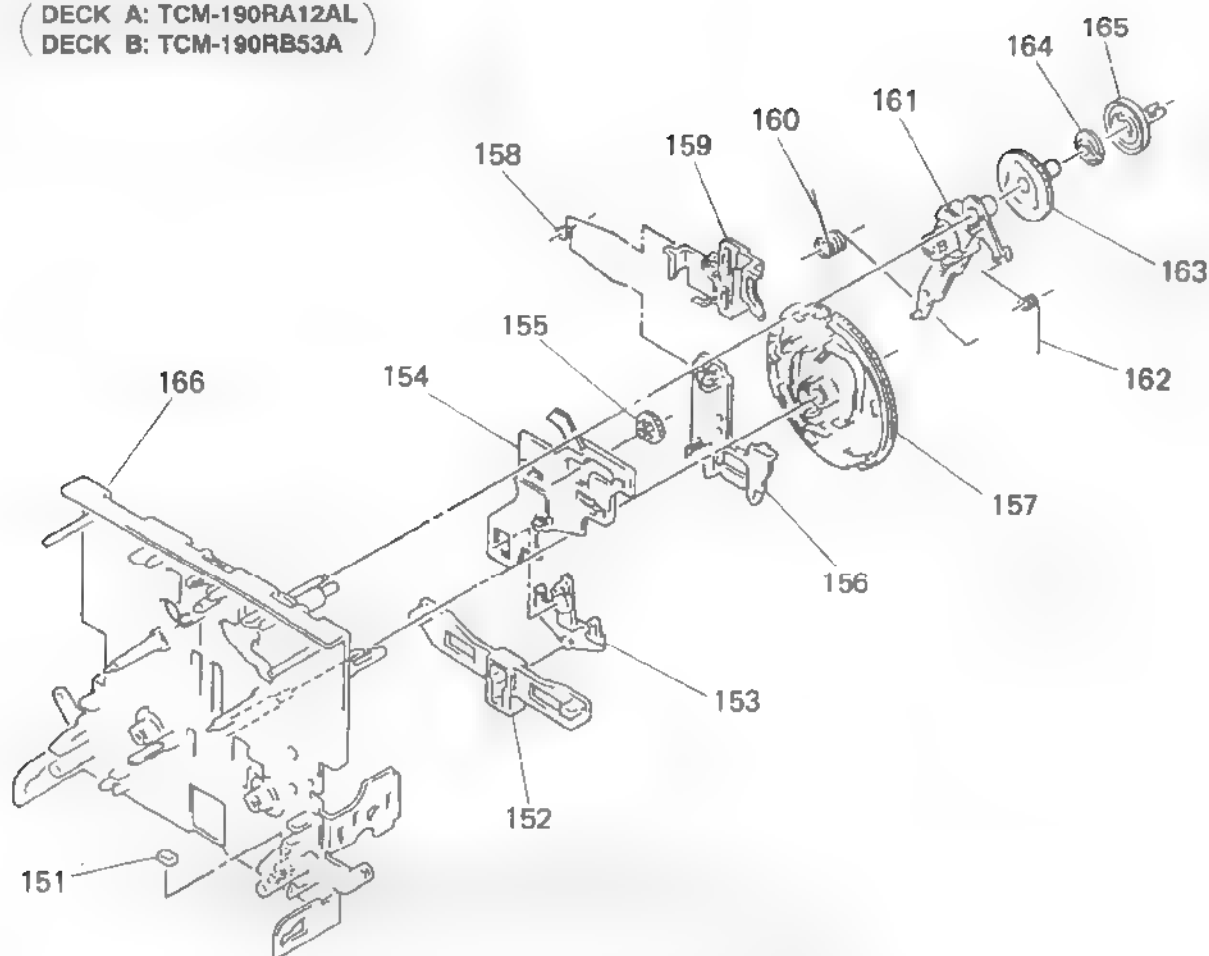
Ref. No.	Part No.	Description	Remark
58	3-354-955-01	LEVER (EJ SAFTY LEVER L)	
59	3-354-961-01	SPRING (EJ SAFTY SPRING L)	
60	3-354-963-01	DAMPER	
61	4-951-620 01	SCREW (2.6X8), +BVTP	
62	3-354-956-01	LEVER (EJ SAFTY LEVER R)	
63	3-354-962-01	SPRING (EJ SAFTY SPRING R)	
♦ 64	3-354-954-01	LEVER (LOCK LEVER R)	

(3) MECHANISM DECK SECTION-1  
(DECK A: TCM-190RA12AL)  
(DECK B: TCM-190RB53A)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
101	X-3366-047-1	LEVER (PINCH F) ASSY		* 116	A-2007-134-A	AUDIO BOARD, COMPLETE (DECK B)	
102	3-907-362-01	SPRING, TORSION		* 116	A-2007-266-A	AUDIO BOARD, COMPLETE (DECK A)	
103	3-356-713-01	WASHER		117	1-638-983-11	MOTOR FLEXIBLE BOARD	
104	3-356-714-01	WASHER		118	3-359-430-01	SPRING (CASSETTE RETAINER), LEAF	
105	X-3366-048-1	LEVER (PINCH R) ASSY		119	3-359-466-01	BELT (FR), SQUARE	
106	3-362-308-01	CAP (REEL)		* 120	1-638-020-11	LEAF SW BOARD (DECK A)	
107	X-3366-971-1	TABLE ASSY (B), REEL		* 120	1-638-020-11	LEAF SW BOARD (DECK B)	
108	X-3366-970-1	TABLE ASSY, REEL		121	3-388-848-01	SCREW (P2X6) (B TIGHT)	
109	3-359-424-01	GEAR (REV GEAR)		122	3-701-440-11	WASHER, 3.5 (DECK B)	
110	X-3367-629-1	FLYWHEEL (FWD) ASSY		122	3-701-440-21	WASHER, 3.5 (DECK A)	
111	X-3359-410-1	FLYWHEEL (REV) ASSY (DECK A)		HP101	A-2003-757-A	BASE ASSY, HEAD (DECK A)	
111	X-3367-630-1	FLYWHEEL (REV) ASSY (DECK B)		HRPE101A	2003-930-A	BASE ASSY, HEAD (DECK B)	
112	3-359-417-01	BELT (FLAT), CAPSTAN		M101A	X-3363-501-2	MOTOR ASSY (REEL) (DECK A)	
113	3-575-321-00	RETAINER, THRUST, CAPSTAN		M101B	X-3363-501-2	MOTOR ASSY (REEL) (DECK B)	
114	3-359-436-11	BASE (THRUST RETAINER), FITTING		M102A	X-3365-377-2	MOTOR ASSY (CAPSTAN) (DECK A)	
115	3-359-414-01	SCREW (+PTPH 2X23)		M102B	X-3365-377-2	MOTOR ASSY (CAPSTAN) (DECK B)	

(4) MECHANISM DECK SECTION-2  
 (DECK A: TCM-190RA12AL)  
 (DECK B: TCM-190RB53A)



Ref.No.	Part No.	Description	Remark
151	3-359-469-01	SPACER	
152	3-359-425-01	SLIDER (REVERSE SLIDER)	
153	3-359-426-01	LEVER (REVERSE LEVER)	
• 154	3-359-415-01	SLIDER (TRIGGER SLIDER) (DECK A)	
• 154	3-359-415-11	SLIDER (TRIGGER SLIDER) (DECK B)	
155	3-359-448-01	GEAR (TRIGGER)	
156	3-359-427-01	SLIDER (LEVERSE SLIDER)	
157	3-359-420-01	GEAR (CAM GEAR)	
158	3-359-454-01	SPRING, TORSION	
159	3-359-429-01	SLIDER (BRAKE PLATE) (DECK A)	

Ref.No.	Part No.	Description	Remark
159	3-359-429-11	SLIDER (BRAKE PLATE) (DECK B)	
160	3-359-456-01	SPRING (TRIGGER SPRING), TORSION	
161	X-3366 569-1	ARM ASSY, FR	
162	3-924-185-11	SPRING (FR ARM), TORSION	
163	3-359-419-11	GEAR (FR GEAR)	
164	3-359-421-01	CLUTCH (REEL DISK)	
165	3-359-418-01	PULLEY (FR PULLEY)	
166	X-3359-415-1	CHASSIS ASSY, MECHANICAL (DECK A)	
166	X-3363 790-1	CHASSIS ASSY, MECHANICAL (DECK B)	



# SECTION 7 ELECTRICAL PARTS LIST

AUDIO (A)

AUDIO (B)

## NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS  
All resistors are in ohms.  
METAL: Metal film resistor.  
METAL OXIDE: Metal oxide-film resistor.  
F: nonflammable

- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS  
In each case, u:  $\mu$ , for example:  
uA...:  $\mu$ A., uPA...:  $\mu$ PA.,  
uPB...:  $\mu$ PB., uPC...:  $\mu$ PC., uPD...:  $\mu$ PD.
- CAPACITORS  
uF:  $\mu$ F
- COILS  
uH:  $\mu$ H

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
•	A 2007 266 A	AUDIO (A) BOARD, COMPLETE (DECK A)		R14	1 216 068 00	METAL CHIP	6.2K 5% 1/10W
	*****			R21	1-216-099-00	METAL CHIP	120K 5% 1/10W
	< CAPACITOR >			R22	1-216-025-00	METAL GLAZE	100 5% 1/10W
C11	1-163-131-00	CERAMIC CHIP	390PF 5% 50V	R23	1-216-100-00	METAL GLAZE	130K 5% 1/10W
C12	1-136-157-00	FILM	0.022uF 5% 50V	R24	1-216-068-00	METAL CHIP	6.2K 5% 1/10W
C13	1 124 234 00	ELECT	22uF 20% 16V	R31	1-216-033-00	METAL CHIP	220 5% 1/10W
C18	1-163-117-00	CERAMIC CHIP	100PF 5% 50V	R32	1-216-033-00	METAL CHIP	220 5% 1/10W
C21	1 163 131 00	CERAMIC CHIP	390PF 5% 50V	R71	1-216-082-00	METAL GLAZE	24K 5% 1/10W
C22	1-136-157-00	FILM	0.022uF 5% 50V	R72	1-216-081-00	METAL CHIP	22K 5% 1/10W
C23	1-124-234-00	ELECT	22uF 20% 16V	R73	1 216-089 00	METAL CHIP	47K 5% 1/10W
C28	1 163-117 00	CERAMIC CHIP	100PF 5% 50V	R74	1-216-089-00	METAL CHIP	47K 5% 1/10W
C31	1 124 234 00	ELECT	22uF 20% 16V	R807	1 249 417 11	CARBON	1K 5% 1/4W
C32	1-124-234-00	ELECT	22uF 20% 16V	R808	1 249 426-11	CARBON	5.6K 5% 1/4W
C72	1-124-499-11	ELECT, NONPOLAR 1uF	20% 50V		< VARIABLE RESISTOR >		
	< CONNECTOR >			RV11A	1-241-761 11	RES, ADJ, CARBON 1K	
• CNJ31	1 580 782 11	CONNECTOR, BOARD TO BOARD		RV21A	1-241-761-11	RES, ADJ, CARBON 1K	
CNJ72	1 764 902-11	CONNECTOR, FFC/FPC 4P		RV71A	1-241-630-11	RES, ADJ, CARBON 10K	
• CNP32	1-580-772-11	PIN, CONNECTOR (PC BOARD) 4P		RV72A	1-241-630-11	RES, ADJ, CARBON 10K	
• CNP71	1 564 719 11	PIN, CONNECTOR (SMALL TYPE) 3P		*****			
	< IC >			•	A-2007-134-A	AUDIO (B) BOARD, COMPLETE (DECK B)	
IC31A	8 759 106-02	IC uPC4570G2			*****		
	< JUMPER RESISTOR >				< CAPACITOR >		
JW1	1-216-295 00	CONDUCTOR, CHIP		C11	1-163-131-00	CERAMIC CHIP	390PF 5% 50V
JW51	1-216-296-00	METAL CHIP	0 5% 1/8W	C12	1 163 117 00	CERAMIC CHIP	100PF 5% 50V
JW52	1-216-296-00	METAL CHIP	0 5% 1/8W	C13	1-136 153-00	FILM	0.01uF 5% 50V
JW53	1 216-296-00	METAL CHIP	0 5% 1/8W	C14	1-126-177-11	ELECT	100uF 20% 16V
JW54	1-216-296-00	METAL CHIP	0 5% 1/8W	C15	1-124-234-00	ELECT	22uF 20% 16V
	< TRANSISTOR >			C16	1-136-273-00	FILM	75PF 5% 630V
Q71A	8-729-216-22	TRANSISTOR 2SA1162		C17	1-164-080-11	CERAMIC	390PF 10% 50V
	< RESISTOR >			C18	1-163-103-00	CERAMIC CHIP	27PF 5% 50V
R11	1 216-099-00	METAL CHIP	120K 5% 1/10W	C21	1-163-131-00	CERAMIC CHIP	390PF 5% 50V
R12	1-216-025-00	METAL GLAZE	100 5% 1/10W	C22	1-163-117-00	CERAMIC CHIP	100PF 5% 50V
R13	1-216-100-00	METAL GLAZE	130K 5% 1/10W	C23	1-136-153-00	FILM	0.01uF 5% 50V
				C24	1-126-177-11	ELECT	100uF 20% 16V
				C25	1-124-234-00	ELECT	22uF 20% 16V
				C26	1-136-273-00	FILM	75PF 5% 630V
				C27	1-164-080-11	CERAMIC	390PF 10% 50V

# AUDIO (B)

Ref. No.	Part No.	Description	Remark
C28	1-163-103-00	CERAMIC CHIP 27PF	5% 50V
C31	1-124-234-00	ELECT 22uF	20% 16V
C32	1 124 234 00	ELECT 22uF	20% 16V
C33	1-124-234-00	ELECT 22uF	20% 16V
C51	1 163 019 00	CERAMIC CHIP 0.0068uF	10% 50V
C52	1-163-019-00	CERAMIC CHIP 0.0068uF	10% 50V
C53	1 163 022 00	CERAMIC CHIP 0.012uF	10% 50V
C54	1 136 559 11	FILM 0.0047uF	5% 630V
C56	1-164-505-11	CERAMIC CHIP 2.2uF	16V
C57	1-164-346-11	CERAMIC CHIP 1uF	16V
C58	1-163 024 00	CERAMIC CHIP 0.018uF	10% 50V
C72	1 124 459 11	ELECT. NONPOLAR 1uF	20% 50V

## CONNECTOR

- CNJ31 1-580-782-11 CONNECTOR, BOARD TO BOARD
- CNJ33 1 580-782 11 CONNECTOR, BOARD TO BOARD
- CNJ72 1-764-962-11 CONNECTOR, FFC/FPC 4P
- CNP32 1 580 781 11 PIN, CONNECTOR (PC BOARD) 7P
- CNP71 1-564-719 11 PIN, CONNECTOR (SMALL TYPE) 3P

## IC

- IC31B 8 759 249 21 IC uPC1330GR
- IC32 8 759 106 02 IC uPC4570G2

## JUMPER RESISTOR

JW1	1-216-295-00	CONDUCTOR, CHIP	
JW2	1 216 295 00	CONDUCTOR, CHIP	
JW11	1 216 296 00	METAL CHIP 0	5% 1/8W
JW12	1-216-296-00	METAL CHIP 0	5% 1/8W
JW13	1 216 296 00	METAL CHIP 0	5% 1/8W
JW14	1 216 296 00	METAL CHIP 0	5% 1/8W
JW15	1 216 296 00	METAL CHIP 0	5% 1/8W
JW16	1-216-296-00	METAL CHIP 0	5% 1/8W
JW17	1 216 296 00	METAL CHIP 0	5% 1/8W
JW18	1 216 296 00	METAL CHIP 0	5% 1/8W
JW19	1 216 296 00	METAL CHIP 0	5% 1/8W
JW20	1 216 296 00	METAL CHIP 0	5% 1/8W
JW21	1-216-296-00	METAL CHIP 0	5% 1/8W
JW22	1-216-296-00	METAL CHIP 0	5% 1/8W
JW23	1-216-296-00	METAL CHIP 0	5% 1/8W
JW24	1 216 296 00	METAL CHIP 0	5% 1/8W
JW25	1 216 296 00	METAL CHIP 0	5% 1/8W
JW26	1-216-296-00	METAL CHIP 0	5% 1/8W
JW27	1-216-296-00	METAL CHIP 0	5% 1/8W

## COIL

L11	1-410-780 11	INDUCTOR 27uH
L21	1 410-780 11	INDUCTOR 27uH

Ref. No.	Part No.	Description	Remark
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## TRANSISTOR

Q51	8-729-142-46	TRANSISTOR 2SC2001 LK
Q52	8 729 142 46	TRANSISTOR 2SC2001-LK
Q53	8-729-111-29	TRANSISTOR 2SD1616A K
Q71B	8-729-216-22	TRANSISTOR 2SA1162

## RESISTOR

R11	1-216-099-00	METAL CHIP 120K 5%	1/10W
R12	1-216-033-00	METAL CHIP 220 5%	1/10W
R13	1 216-081-00	METAL CHIP 22K 5%	1/10W
R14	1-216-075-00	METAL CHIP 12K 5%	1/10W
R15	1-216-107-00	METAL CHIP 270K 5%	1/10W
△R16	1-249-430-11	CARBON 12K 5%	1/4W
R21	1-216-099-00	METAL CHIP 120K 5%	1/10W
R22	1-216-033-00	METAL CHIP 220 5%	1/10W
R23	1-216-081-00	METAL CHIP 22K 5%	1/10W
R24	1-216-075-00	METAL CHIP 12K 5%	1/10W
R25	1-216-107-00	METAL CHIP 270K 5%	1/10W
△R26	1-249-430-11	CARBON 12K 5%	1/4W
R31	1 216 033 00	METAL CHIP 220 5%	1/10W
R32	1-216-033-00	METAL CHIP 220 5%	1/10W
R33	1 216 073 00	METAL CHIP 10K 5%	1/10W
△R41	1-249-393-11	CARBON 10 5%	1/4W
△R42	1-249-393-11	CARBON 10 5%	1/4W
R51	1-216-075-00	METAL CHIP 12K 5%	1/10W
R52	1-216-075-00	METAL CHIP 12K 5%	1/10W
R53	1-216-073-00	METAL CHIP 10K 5%	1/10W
R54	1-216-309-00	METAL CHIP 5.6 5%	1/10W
R55	1 216 309 00	METAL CHIP 5.6 5%	1/10W
R56	1 216-298-00	METAL CHIP 2.2 5%	1/10W
R71	1-216-082-00	METAL GLAZE 24K 5%	1/10W
R72	1-216-081-00	METAL CHIP 22K 5%	1/10W
R73	1-216-089-00	METAL CHIP 47K 5%	1/10W
R74	1-216-089-00	METAL CHIP 47K 5%	1/10W

## VARIABLE RESISTOR

RV11B	1-241-761-11	RES. ADJ. CARBON 1K
RV12	1 238-551-11	RES. ADJ. CARBON 220K
RV21B	1-241-761-11	RES. ADJ. CARBON 1K
RV22	1-238 551 11	RES. ADJ. CARBON 220K
RV71B	1-241-630-11	RES. ADJ. CARBON 10K
RV72B	1 241 630 11	RES. ADJ. CARBON 10K

## TRANSFORMER

T51	1 406 419 11	COIL, BIAS OSCILLATION
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The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
*	1 638-020-11	LEAF SW (A) BOARD (DECK A) *****	
		< CONNECTOR >	
+ CNP81	1-568-850-11	SOCKET, CONNECTOR 7P	
		< IC >	
IC81A	8-749-924-10	IC PHONT REFLECTOR NJL5165K-B(III)	
		< RESISTOR >	
R84	1-249-417-11	CARBON 1K 5% 1/4W	
R85	1-249-408-11	CARBON 180 5% 1/4W	
		< SWITCH >	
S81A	1-571-958-11	SWITCH, PUSH (1 KEY) (STOP)	
S82A	1-571-281-21	SWITCH, LEAF (70 UEQ)	
S86A	1-571-281-21	SWITCH, LEAF (HALF)	
*****			
*	1-638-020-11	LEAF SW (B) BOARD (DECK B) *****	
		< CONNECTOR >	
+ CNP81	1-568-850-11	SOCKET, CONNECTOR 7P	
		< IC >	
IC81B	8-749-924-10	IC PHONT REFLECTOR NJL5165K-B(III)	
		< RESISTOR >	
R81	1-249-414-11	CARBON 560 5% 1/4W	
R82	1-247-818-11	CARBON 300 5% 1/4W	
R83	1-247-834-11	CARBON 1.3K 5% 1/4W	
R84	1-249-417-11	CARBON 1K 5% 1/4W	
R85	1-249-408-11	CARBON 180 5% 1/4W	
		< SWITCH >	
S81B	1-571-958-11	SWITCH, PUSH (1 KEY) (STOP)	
S82B	1-571-281-21	SWITCH, LEAF (70 UEQ)	
S83B	1-571-281-21	SWITCH, LEAF (METAL)	
S84	1-571-281-21	SWITCH, LEAF (REC-A)	
S85	1-571-281-21	SWITCH, LEAF (REC-B)	
S86B	1-571-281-21	SWITCH, LEAF (HALF)	
*****			

## LEAF SW (A)

## LEAF SW (B)

## MAIN

Ref. No.	Part No.	Description	Remark
*	A-2007-332-A	MAIN BOARD, COMPLETE *****	
		1-537-770-11 TERMINAL BOARD, GROUND	
		7-685-646-79 SCREW +BVTP 3X8 TYPE2 N-S	
		< CAPACITOR >	
C101	1-124-907-11	ELECT 10uF 20% 50V	
C102	1-124-907-11	ELECT 10uF 20% 50V	
C111	1-137-368-11	FILM 0.0047uF 5% 50V	
C112	1-162-291-31	CERAMIC 560PF 10% 50V	
C113	1-137-399-11	FILM 0.1uF 5% 50V	
C115	1-124-903-11	ELECT 1uF 20% 50V	
C116	1-124-902-00	ELECT 0.47uF 20% 50V	
C117	1-124-907-11	ELECT 10uF 20% 50V	
C131	1-162-600-11	CERAMIC 0.0047uF 20% 16V	
C132	1-162-302-11	CERAMIC 0.0022uF 20% 16V	
C133	1-124-902-00	ELECT 0.47uF 20% 50V	
C151	1-124-907-11	ELECT 10uF 20% 50V	
C152	1-162-286-31	CERAMIC 220PF 10% 50V	
C153	1-124-903-11	ELECT 1uF 20% 50V	
C211	1-137-368-11	FILM 0.0047uF 5% 50V	
C212	1-162-291-31	CERAMIC 560PF 10% 50V	
C213	1-137-399-11	FILM 0.1uF 5% 50V	
C215	1-124-903-11	ELECT 1uF 20% 50V	
C216	1-124-902-00	ELECT 0.47uF 20% 50V	
C217	1-124-907-11	ELECT 10uF 20% 50V	
C251	1-124-907-11	ELECT 10uF 20% 50V	
C252	1-162-286-31	CERAMIC 220PF 10% 50V	
C253	1-124-903-11	ELECT 1uF 20% 50V	
C301	1-164-159-11	CERAMIC 0.1uF 50V	
C302	1-162-290-31	CERAMIC 470PF 10% 50V	
C303	1-164-159-11	CERAMIC 0.1uF 50V	
C304	1-162-290-31	CERAMIC 470PF 10% 50V	
C311	1-124-903-11	ELECT 1uF 20% 50V	
C312	1-124-443-00	ELECT 100uF 20% 10V	
C313	1-124-443-00	ELECT 100uF 20% 10V	
C501	1-124-564-11	ELECT 4700uF 20% 25V	
C502	1-124-564-11	ELECT 4700uF 20% 25V	
C505	1-124-443-00	ELECT 100uF 20% 10V	
C506	1-124-443-00	ELECT 100uF 20% 10V	
C507	1-124-903-11	ELECT 1uF 20% 50V	
C508	1-124-902-00	ELECT 0.47uF 20% 50V	
C511	1-124-443-00	ELECT 100uF 20% 10V	
C512	1-124-443-00	ELECT 100uF 20% 10V	
C513	1-124-907-11	ELECT 10uF 20% 50V	
C514	1-124-907-11	ELECT 10uF 20% 50V	
C515	1-124-907-11	ELECT 10uF 20% 50V	
C551	1-124-907-11	ELECT 10uF 20% 50V	

# MAIN

Ref. No.	Part No.	Description	Remark
C552	1-124-443-00	ELECT 100uF	20% 10V
C901	1-124-584-00	ELECT 100uF	20% 10V
C903	1-124-120-11	ELECT 220uF	20% 25V
C911	1-164-159-11	CERAMIC 0.1uF	50V
C990	1-164-159-11	CERAMIC 0.1uF	50V
C991	1-161-494-00	CERAMIC 0.022uF	25V
C992	1-164-159-11	CERAMIC 0.1uF	50V
C993	1-164-159-11	CERAMIC 0.1uF	50V
C994	1-161-494-00	CERAMIC 0.022uF	25V
C995	1-164-159-11	CERAMIC 0.1uF	50V
< CONNECTOR >			
CN502	1-564-506-11	PLUG, CONNECTOR 3P	
* CN503	1-564-507-11	PLUG, CONNECTOR 4P	
* CN902	1-560-060-00	PIN, CONNECTOR 2P	
* CN911	1-580-784-11	CONNECTOR, BOARD TO BOARD	
* CN912	1-580-784-11	CONNECTOR, BOARD TO BOARD	
* CN913	1-580-784-11	CONNECTOR, BOARD TO BOARD	
* CN914	1-568-826-11	SOCKET, CONNECTOR 7P	
* CN915	1-568-826-11	SOCKET, CONNECTOR 7P	
CN950	1-764-017-11	HOUSING, CONNECTOR(PC BOARD)17P	
* CN970	1-568-828-11	SOCKET, CONNECTOR 9P	
* CN980	1-568-830-11	SOCKET, CONNECTOR 11P	
< DIODE >			
D501	8-719-024-99	DIODE 11ES2-NTA2B	
D502	8-719-024-99	DIODE 11ES2-NTA2B	
D503	8-719-024-99	DIODE 11ES2-NTA2B	
D504	8-719-024-99	DIODE 11ES2-NTA2B	
D505	8-719-987-63	DIODE 1N4148M	
D582	8-719-987-63	DIODE 1N4148M	
D584	8-719-987-63	DIODE 1N4148M	
D586	8-719-987-63	DIODE 1N4148M	
D901	8-719-987-63	DIODE 1N4148M	
D902	8-719-987-63	DIODE 1N4148M	
D903	8-719-987-63	DIODE 1N4148M	
D904	8-719-024-99	DIODE 11ES2-NTA2B	
D905	8-719-024-99	DIODE 11ES2-NTA2B	
D911	8-719-933-54	DIODE HZS9A2L	
D912	8-719-933-54	DIODE HZS9A2L	
< IC >			
IC101	8-759-098-75	IC HA12171NT	
IC301	8-759-266-35	IC TA8242AK	
IC511	8-759-604-86	IC M5F7807	
IC513	8-759-604-90	IC M5F7907	
IC901	8-759-250-60	IC M50954-261FP	
IC903	8-759-165-82	IC PST600E-T	

Ref. No.	Part No.	Description	Remark
< COIL >			
L991	1-410-525-11	INDUCTOR 220uH	
< TRANSISTOR >			
Q101	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q201	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q601	8-729-116-56	TRANSISTOR 2SB1068-L	
Q602	8-729-116-56	TRANSISTOR 2SB1068-L	
Q901	8-729-900-65	TRANSISTOR DTA144ES	
Q902	8-729-900-89	TRANSISTOR DTC144ES	
Q903	8-729-900-89	TRANSISTOR DTC144ES	
Q904	8-729-900-65	TRANSISTOR DTA144ES	
Q905	8-729-900-65	TRANSISTOR DTA144ES	
Q906	8-729-900-89	TRANSISTOR DTC144ES	
Q910	8-729-900-65	TRANSISTOR DTA144ES	
Q911	8-729-119-78	TRANSISTOR 2SC2785-HFE	
< RESISTOR >			
R111	1-249-430-11	CARBON 12K 5% 1/4W	
R112	1-249-431-11	CARBON 15K 5% 1/4W	
R113	1-249-428-11	CARBON 8.2K 5% 1/4W	
R114	1-249-425-11	CARBON 4.7K 5% 1/4W	
R115	1-247-883-00	CARBON 150K 5% 1/4W	
R116	1-247-868-11	CARBON 36K 5% 1/4W	
R120	1-249-431-11	CARBON 15K 5% 1/4W	
R131	1-249-431-11	CARBON 15K 5% 1/4W	
R132	1-249-441-11	CARBON 100K 5% 1/4W	
R133	1-247-887-00	CARBON 220K 5% 1/4W	
R151	1-249-421-11	CARBON 2.2K 5% 1/4W	
R152	1-249-428-11	CARBON 8.2K 5% 1/4W	
R153	1-247-840-00	CARBON 2.4K 5% 1/4W	
R154	1-249-433-11	CARBON 22K 5% 1/4W	
R155	1-249-417-11	CARBON 1K 5% 1/4W	
R210	1-215-451-00	METAL 18K 1% 1/4W	
R211	1-249-430-11	CARBON 12K 5% 1/4W	
R212	1-249-431-11	CARBON 15K 5% 1/4W	
R213	1-249-428-11	CARBON 8.2K 5% 1/4W	
R214	1-249-425-11	CARBON 4.7K 5% 1/4W	
R231	1-249-429-11	CARBON 10K 5% 1/4W	
R232	1-249-429-11	CARBON 10K 5% 1/4W	
R233	1-249-429-11	CARBON 10K 5% 1/4W	
R234	1-249-429-11	CARBON 10K 5% 1/4W	
R235	1-249-429-11	CARBON 10K 5% 1/4W	
R236	1-249-429-11	CARBON 10K 5% 1/4W	
R237	1-249-429-11	CARBON 10K 5% 1/4W	
R238	1-249-429-11	CARBON 10K 5% 1/4W	
R239	1-249-429-11	CARBON 10K 5% 1/4W	
R240	1-249-429-11	CARBON 10K 5% 1/4W	

**MAIN**
**PANEL (A)**

Ref. No.	Part No.	Description	Remark
R241	1-247-864-11	CARBON	24K 5% 1/4W
R251	1-249-421-11	CARBON	2.2K 5% 1/4W
R252	1-249-428-11	CARBON	8.2K 5% 1/4W
R253	1-247-840-00	CARBON	2.4K 5% 1/4W
R254	1-249-433-11	CARBON	22K 5% 1/4W
R255	1-249-417-11	CARBON	1K 5% 1/4W
R301	1-247-807-31	CARBON	100 5% 1/4W
R302	1-247-807-31	CARBON	100 5% 1/4W
R311	1-249-381-11	CARBON	1 5% 1/4W
R312	1-249-381-11	CARBON	1 5% 1/4W
R313	1-249-381-11	CARBON	1 5% 1/4W
R314	1-249-381-11	CARBON	1 5% 1/4W
R501	1-217-371-00	FUSIBLE	0.47 10% 1/4W
R502	1-217-371-00	FUSIBLE	0.47 10% 1/4W
R601	1-249-429-11	CARBON	10K 5% 1/4W
R602	1-249-415-11	CARBON	680 5% 1/4W
R603	1-249-429-11	CARBON	10K 5% 1/4W
R604	1-249-415-11	CARBON	680 5% 1/4W
R911	1-249-425-11	CARBON	4.7K 5% 1/4W
R912	1-249-429-11	CARBON	10K 5% 1/4W
R913	1-249-393-11	CARBON	10 5% 1/4W
R915	1-249-429-11	CARBON	10K 5% 1/4W
R916	1-247-903-00	CARBON	1M 5% 1/4W
R917	1-249-429-11	CARBON	10K 5% 1/4W
R918	1-249-429-11	CARBON	10K 5% 1/4W
R919	1-249-441-11	CARBON	100K 5% 1/4W
R920	1-249-441-11	CARBON	100K 5% 1/4W
R921	1-249-429-11	CARBON	10K 5% 1/4W
R922	1-249-429-11	CARBON	10K 5% 1/4W
R923	1-249-429-11	CARBON	10K 5% 1/4W
R924	1-249-429-11	CARBON	10K 5% 1/4W
R925	1-249-429-11	CARBON	10K 5% 1/4W
R926	1-249-429-11	CARBON	10K 5% 1/4W
R927	1-249-429-11	CARBON	10K 5% 1/4W
R931	1-247-895-00	CARBON	470K 5% 1/4W
R932	1-247-895-00	CARBON	470K 5% 1/4W
R933	1-247-807-31	CARBON	100 5% 1/4W
R934	1-247-807-31	CARBON	100 5% 1/4W
R935	1-249-413-11	CARBON	470 5% 1/4W
R937	1-249-411-11	CARBON	330 5% 1/4W
R938	1-247-807-31	CARBON	100 5% 1/4W
R939	1-247-807-31	CARBON	100 5% 1/4W
R940	1-247-807-31	CARBON	100 5% 1/4W
R941	1-247-811-31	CARBON	150 5% 1/4W
R942	1-249-421-11	CARBON	2.2K 5% 1/4W
R943	1-249-421-11	CARBON	2.2K 5% 1/4W
R951	1-249-429-11	CARBON	10K 5% 1/4W
R952	1-249-425-11	CARBON	4.7K 5% 1/4W
R953	1-249-434-11	CARBON	27K 5% 1/4W

Ref. No.	Part No.	Description	Remark
R954	1-249-429-11	CARBON	10K 5% 1/4W
R955	1-249-425-11	CARBON	4.7K 5% 1/4W
R956	1-249-434-11	CARBON	27K 5% 1/4W

**< VARIABLE RESISTOR >**

RV101	1-238-600-11	RES. ADJ. CARBON 10K
RV201	1-238-600-11	RES. ADJ. CARBON 10K

**< VIBRATOR >**

X901	1-577-358-21	VIBRATOR, CERAMIC (4 MHz)
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*	1-655-022-13	PANEL (A) BOARD
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**< CONNECTOR >**

+ CN701	1-560-852-11	SOCKET, CONNECTOR 9P
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**< DIODE >**

D701	8-719-046-42	DIODE SEL5421E-TH8F
D702	8-719-046-42	DIODE SEL5421E-TH8F

**< RESISTOR >**



R701	1-247-811-31	CARBON	150 5% 1/4W
R702	1-249-409-11	CARBON	220 5% 1/4W
R703	1-249-418-11	CARBON	1.2K 5% 1/4W
R704	1-249-419-11	CARBON	1.5K 5% 1/4W
R705	1-247-850-11	CARBON	6.2K 5% 1/4W
R706	1-247-858-11	CARBON	13K 5% 1/4W

**< SWITCH >**

S701	1-554-303-21	SWITCH TACTILE (■)
S702	1-554-303-21	SWITCH TACTILE (▷)
S703	1-554-303-21	SWITCH TACTILE (◁)
S704	1-554-303-21	SWITCH TACTILE (◄◄)
S705	1-554-303-21	SWITCH TACTILE (►►)

S750	1-571-298-11	SWITCH SLIDE (DOLBY NR)
S751	1-571-296-11	SWITCH SLIDE (DIRECTION MODE)

\*\*\*\*\*

The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

**PANEL (B)****POWER 1**

Ref. No.	Part No.	Description	Remark
•	1-655-023-13	PANEL (B) BOARD *****	
		CONNECTOR	
• CN801	1-568-854-11	SOCKET, CONNECTOR 11P	
		DIODE	
D801	8 719 046 46	DIODE SEL5221S TH8F	
D802	8 719 046 38	DIODE SEL5821A TH8F	
D803	8 719 046 42	DIODE SEL5421E TH8F	
D804	8 719 046 42	DIODE SEL5421E TH8F	
D805	8 719 046 38	DIODE SEL5821A-TH8F	
D806	8 719 046 46	DIODE SEL5221S-TH8F	
		RESISTOR	
R801	1 247 811 31	CARBON 150 5% 1/4W	
R802	1 249 409 11	CARBON 220 5% 1/4W	
R803	1 249 411 11	CARBON 330 5% 1/4W	
R804	1-249-411-11	CARBON 330 5% 1/4W	
R805	1 249 413 11	CARBON 470 5% 1/4W	
R806	1 249 415 11	CARBON 680 5% 1/4W	
R807	1 249 417 11	CARBON 1K 5% 1/4W	
R808	1 249 426 11	CARBON 5.6K 5% 1/4W	
		SWITCH	
S801	1-554-303-21	SWITCH, TACTILE (■)	
S802	1 554 303 21	SWITCH, TACTILE (■)	
S803	1 554 303 21	SWITCH, TACTILE (▷)	
S804	1 554 303 21	SWITCH, TACTILE (◁)	
S805	1 554 303 21	SWITCH, TACTILE (◀)	
S806	1 554 303 21	SWITCH, TACTILE (▶▶)	
S807	1-554-303 21	SWITCH, TACTILE (● REC)	
S808	1 554 303 21	SWITCH, TACTILE (HI-SPEED DOUBBING)	
S809	1-554-303 21	SWITCH, TACTILE (CD SYNCHRO)	
*****			
•	1 655 415 13	POWER 1 BOARD *****	
		IC	
IC512	8 759 604 90	IC MSF7907	
IC551	8-759-231-53	IC MSF7805	
IC552	8 759 231 53	IC MSF7805	
*****			

Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS *****	
7	1-769-664-11	WIRE (FLAT TYPE) (9 CORE)	
8	1 590 574 11	WIRE, FLAT TYPE (7 CORE)	
12	1-590-488-11	WIRE, FLAT TYPE (11 CORE)	
HP101	A-2003-757-A	BASE ASSY, HEAD (DECK A)	
HRPE101A	2003 930 A	BASE ASSY, HEAD (DECK B)	
M101A	X 3363 501 2	MOTOR ASSY (REEL) (DECK A)	
M101B	X-3363 501-2	MOTOR ASSY (REEL) (DECK B)	
M102A	X-3365 377 2	MOTOR ASSY (CAPSTAN) (DECK A)	
M102B	X-3365 377 2	MOTOR ASSY (CAPSTAN) (DECK B)	

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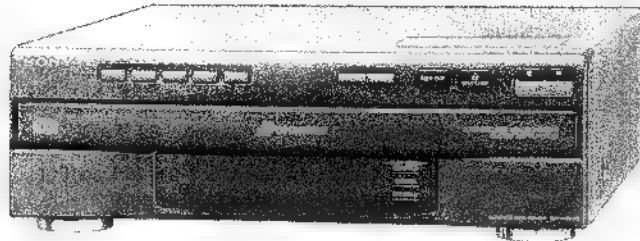
\*\*\*\*\*  
**HARDWARE LIST**  
 \*\*\*\*\*

#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S
#2	7 682 548-04	SCREW +BVTP 3X8 (S)
#3	7-627-556-08	SCREW +P 2.6X2.8
#4	7-621-775-00	SCREW +B 2.6X3

# CDP-N550C

## SERVICE MANUAL

*AEP Model  
UK Model  
E Model  
Australian Model  
Chinese Model  
PX Model*



CDP-N550C is the CD player section in  
LBT-N550, N550K, N550P, N650AV.

Model Name Using Similar Mechanism	HCD-N350
Base Unit Type	BU-5BD19
Optical Pick-up Type	KSS-213BA/S-N

### SPECIFICATIONS

Laser      Semiconductor laser  
Wavelength      780 - 790 nm  
Mass      Approx. 4.5 kg  
Dimensions      Approx. 355 x 120 x 380 mm  
                         (w/h/d, including projections)

COMPACT DISC PLAYER  
**SONY®**



CLASS 1 LASER PRODUCT  
LUOKAN 1 LASERLAITE  
KLASS 1 LASERAPPARAT

<b>CAUTION</b>	: INVISIBLE LASER RADIATION WHEN OPEN AVOID EXPOSURE TO BEAM
<b>ADVARSEL</b>	: USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSFORBEHOLDRE ER UD AF FUNKTION UNNGÅ UDSÆTTELSE FOR STRÅLING
<b>VARO!</b>	: AVATTARESSA JA SUOJALUKUTUS OHITETTARESSA DÄLT ALTRÄNING, NÄR ÖPPNAD DEL ÄR ÖPPNAD
<b>WARNING</b>	: LASERSTRÅLING, NÄR ÖPPNAD DEL ÄR ÖPPNAD OCH SPRÄKKEN ÄR UTSÄTT FÖR STRÅLING
<b>ADVARSEL</b>	: USYNLIG LASERSTRÅLING NÄR DEKSEL ÅPNS UNNGÅ EXPOSERING FÖR STRÅLING

### CAUTION

### Notes on chip component replacement

- ## Flexible Circuit Board Repairing

- ### SAFETY-RELATED COMPONENT WARNING !!



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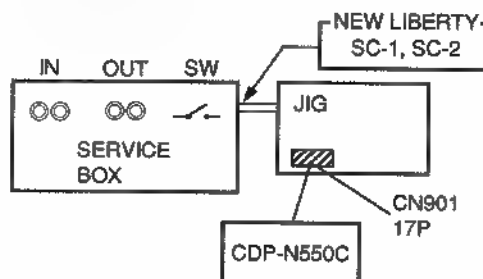
## SERVICE NOTE

### How to confirm the operation with ■ single unit

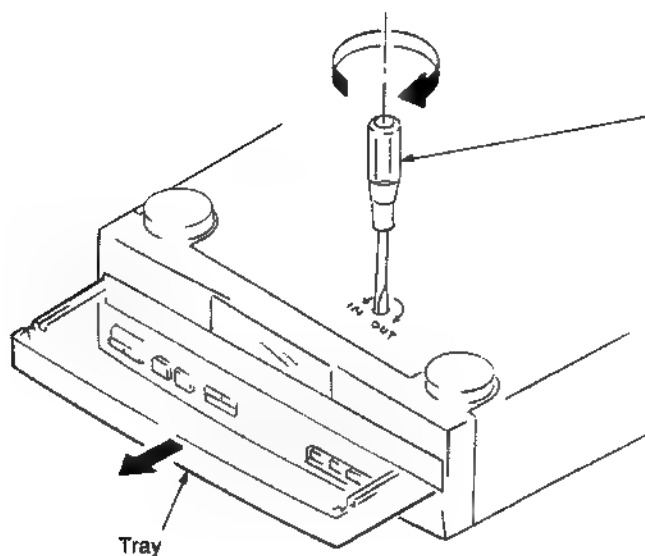
- Normally, this set does not operate with a single unit.  
The exclusive jig (J-2501-081-A) is necessary to operate the set with a single unit.  
The cable attached to set is used for connecting with the jig.

### How to turn the power on

- \* If the power switch of the service box is set to ON, the power supply of the set is turned on. The sound signal is input/output through CN204 (SYSTEM CONTROL 1). In case of using the input/output terminal of SERVICE BOX, press **TIME** button,  button and  button for more than three seconds at once.



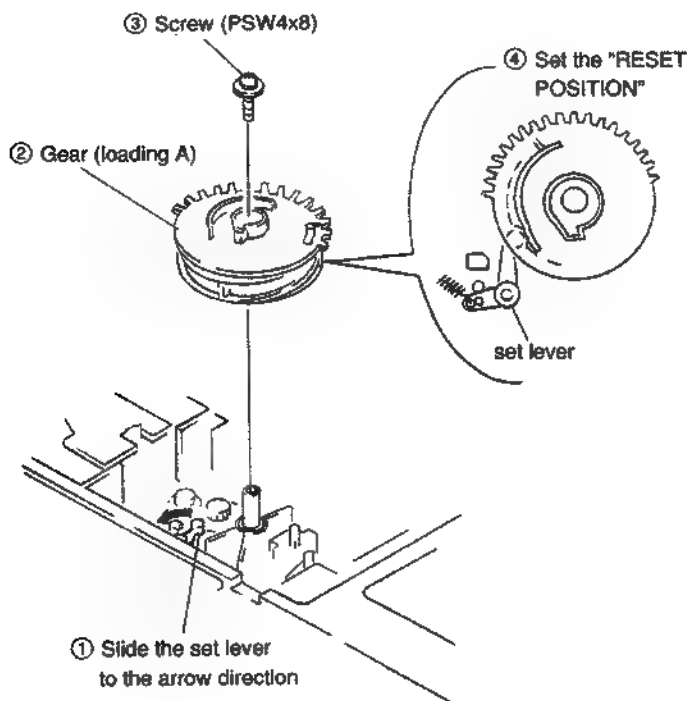
## HOW TO OPEN THE DISC TRAY WHEN POWER SWITCH TURNS OFF



Insert a tapering driver into the aperture of the unit bottom, and turn in the direction of arrow (to OUT direction).

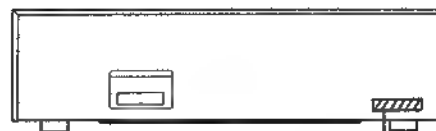
\* To close the disc tray, turn the driver in the reverse direction (to IN direction).

## NOTE FOR GEAR (LOADING A) INSTALLATION



## MODEL IDENTIFICATION

### — BACK PANEL —



	Part No.
AEP, UK, G, IT Model	4-969-794-0□
E, AR, MY, SP, CH Model	4-969-794-1□
MX, PX, AUS, EA Model	4-969-794-2□

#### • Abbreviation

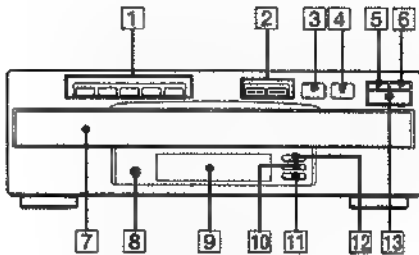
- G : German model.
- IT : Italian model.
- AR : Argentine model.
- MY : Malaysia model.
- SP : Singapore model.
- CH : Chinese model.
- MX : Mexican model.
- AUS : Australian model.
- EA : Saudi Arabia model.

## SECTION 1

### GENERAL

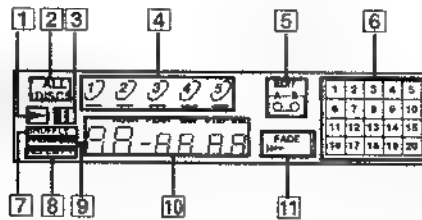
This section is extracted from instruction manual.

#### Compact disc player



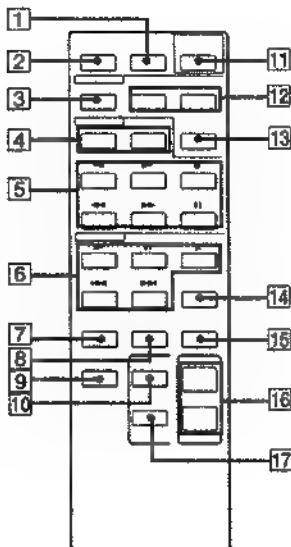
- 1 DISC SELECT 1-5 buttons (8, 9)
- 2 <<<</>>>> buttons (8, 9)
- 3 DISC SKIP button (8)
- 4 OPEN/CLOSE button (8)
- 5 || (pause) button (8)
- 6 ■ (stop) button (8, 9)
- 7 Disc tray
- 8 TIME button (8)
- 9 Display window (8)
- 10 SHUFFLE button (9)
- 11 PROGRAM button (9)
- 12 CONTINUE button (9)
- 13 ▷ (play) button (8)

#### Compact disc player



- 1 Play indication (8)
- 2 ALL DISCS/1 DISC indications (8, 9, 10)
- 3 Pause indication
- 4 Disc calendar (8, 9, 10)
- 5 EDIT indications (16)
- 6 Music calendar (8, 9, 10)
- 7 SHUFFLE indication (9)
- 8 REPEAT indication (10)
- 9 PROGRAM indication (9, 16)
- 10 Playing time indications (8)
- 11 FADE indications

#### Remote (RM-S500L)



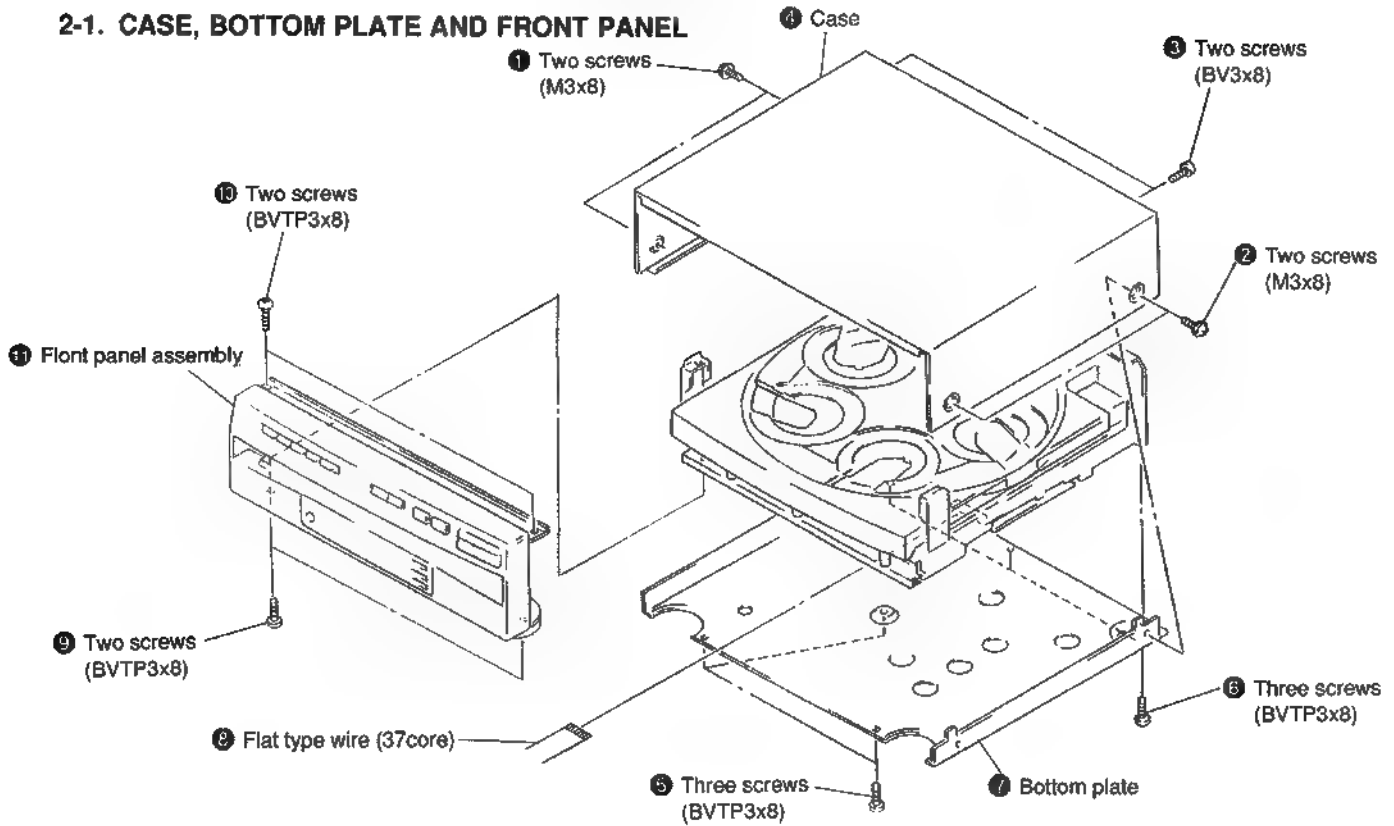
- 1 SLEEP button (21)
- 2 FUNCTION button (7, 14, 15, 18)
- 3 TUNER BAND button (11, 22)
- 4 DECK SELECT buttons (13)
- 5 TAPE operating buttons (13)
  - </> (reverse side play/front side play)
  - <</>> (fast leftward/fast rightward)
  - (stop)
  - || (pause)
- 6 CD operating buttons (8)
  - ▷ (play)
  - <</>> (AMS\*)
  - || (pause)
  - (stop)
- \*AMS: Automatic Music Sensor
- 7 CHECK button (10, 16)
- 8 CLEAR button (10)
- 9 DISC SKIP button (8)
- 10 SELECT 1-5 button (19)
- 11 SYSTEM POWER button (7, 8, 11, 13)
- 12 PRESET (+/-) buttons (12)
- 13 STEREO/MONO button (11)
- 14 REPEAT button (10)
- 15 EDIT button (16)
- 16 VOL (volume) buttons (8)
- 17 P.FILE 1-5 button (20)

## SECTION 2

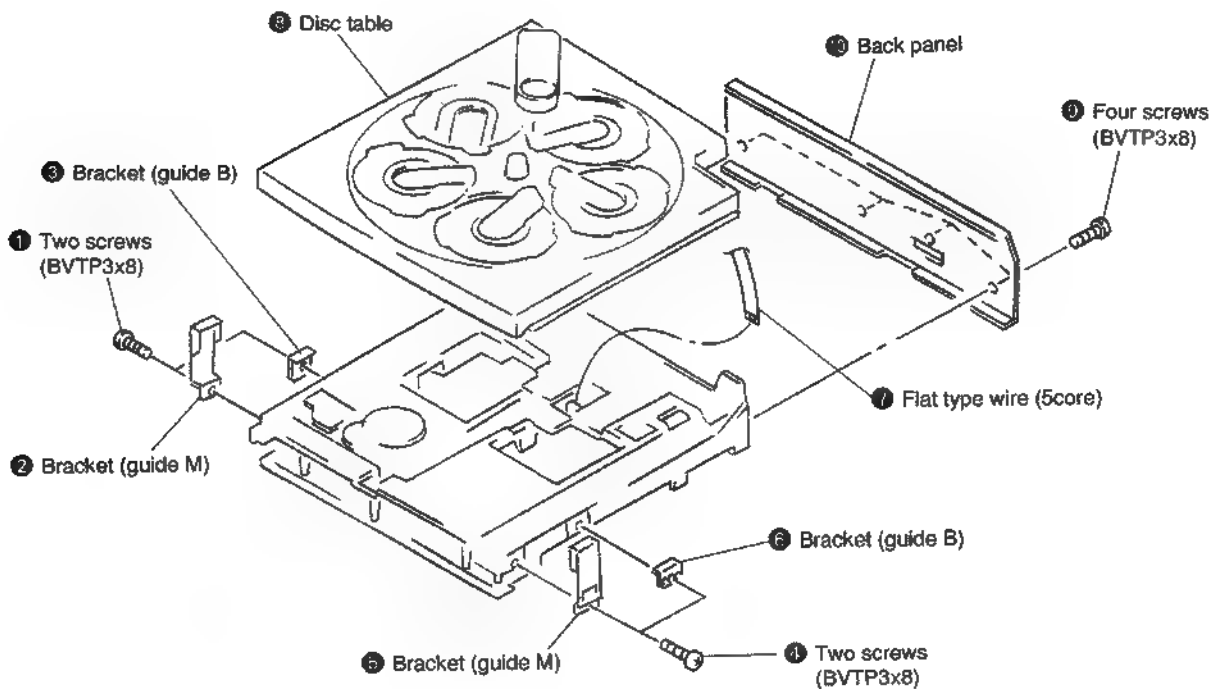
### DISASSEMBLY

**Note :** Follow the disassembly procedure in the numerical order given.

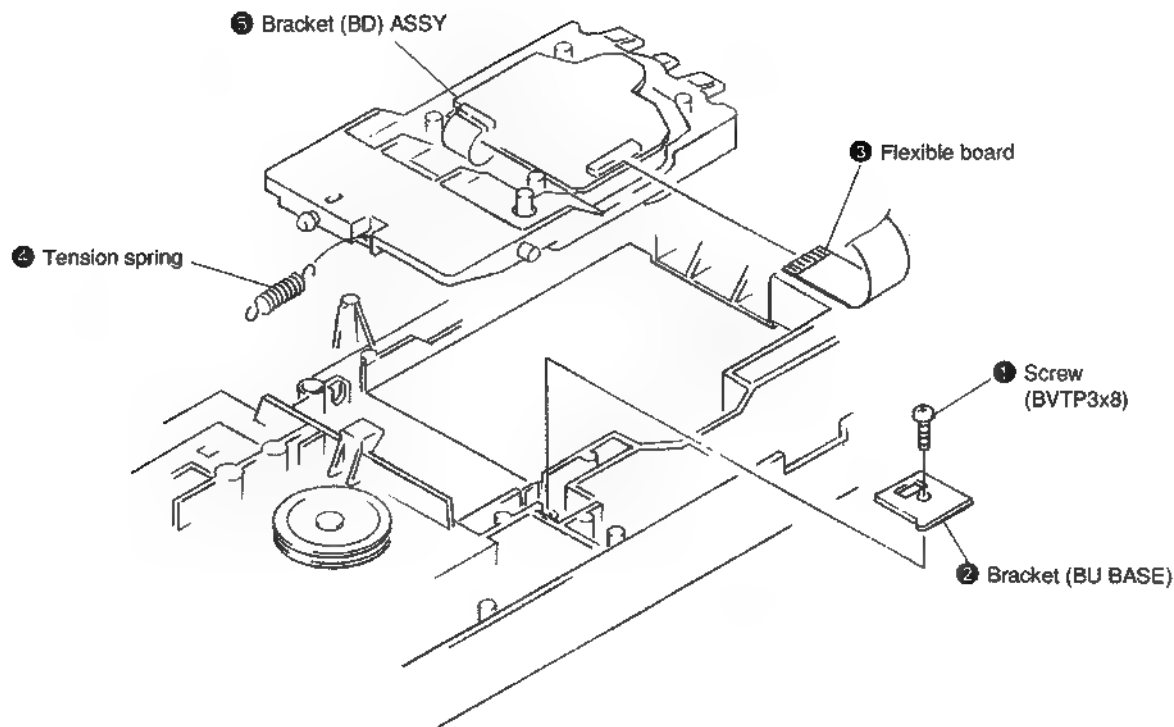
#### 2-1. CASE, BOTTOM PLATE AND FRONT PANEL



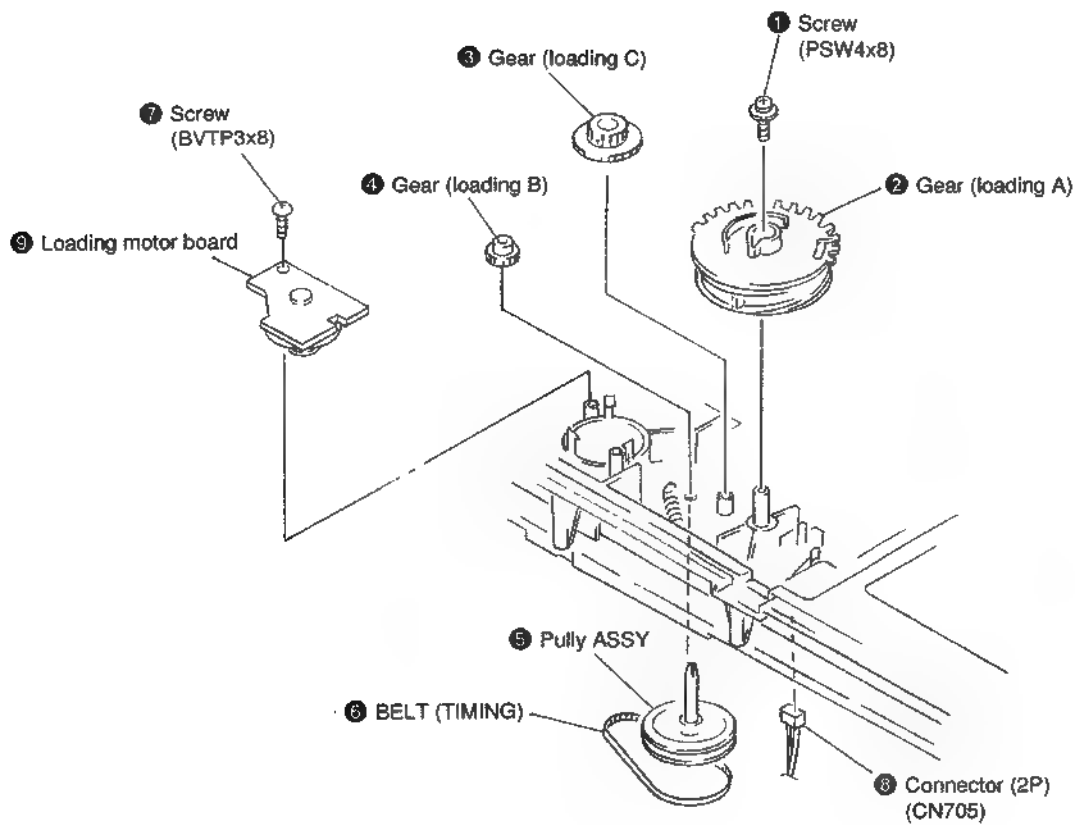
#### 2-2. BACK PANEL AND DISC TABLE



2-3. BRACKET (BD) ASSY



2-4. LOADING MOTOR BOARD



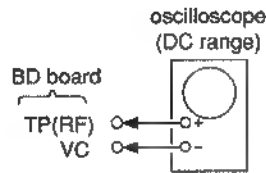
## SECTION 3

### ELECTRICAL ADJUSTMENTS

#### Note :

1. CD Block is basically designed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10M $\Omega$  impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.
5. Adjust the focus bias adjustment when optical block is replaced.

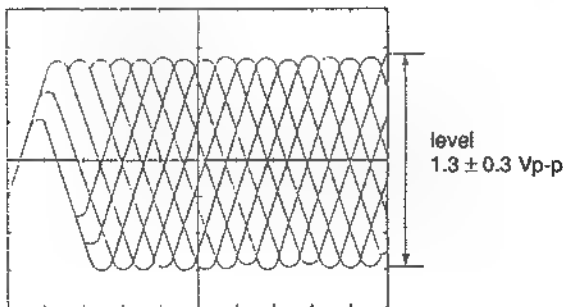
#### Focus Bias Adjustment



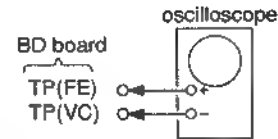
#### Procedure:

1. Connect oscilloscope to test point TP (RF). (GND terminal : VC)
2. Turned Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Adjust RV101 so that the waveform is clear.  
(Clear RF signal waveform means that the shape "◇" can be clearly distinguished at the center of the waveform.)
5. After adjustment, check the RF signal level.

- RF signal  
VOLT/DIV : 200 mV  
TIME/DIV : 500 nS



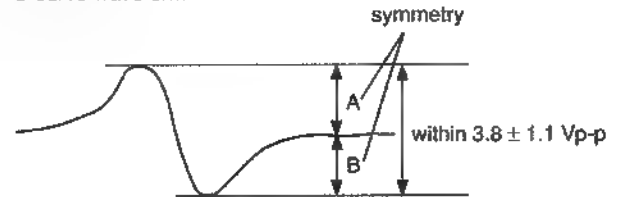
#### S Curve Check



#### Procedure :

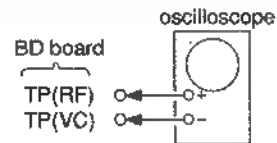
1. Connect oscilloscope to test point TP (FEO).
2. Connect between test point TP (FOK) and GND by lead wire.
3. Turn Power switch on.
4. Put disc (YEDS-18) in and turned Power switch on again and actuate the focus search. (actuate the focus search when disc table is moving in and out.)
5. Check the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within  $3.8 \pm 1.1$  Vp-p.

#### S-curve waveform



6. After check, remove the lead wire connected in step 2.
- Note :**
- Try to measure several times to make sure than the ratio of A : B or B : A is more than 10 : 7.
  - Take sweep time as long as possible and light up the brightness to obtain best waveform.

#### RF Level Check



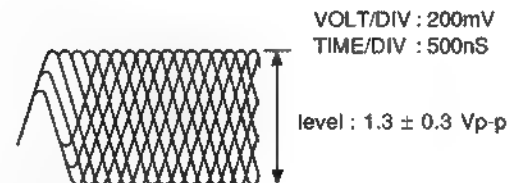
#### Procedure :

1. Connect oscilloscope to test point TP (RF) on BD board.
2. Turned Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

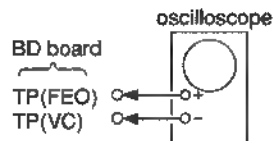
#### Note :

Clear RF signal waveform means that the shape "◇" can be clearly distinguished at the center of the waveform.

#### RF signal waveform



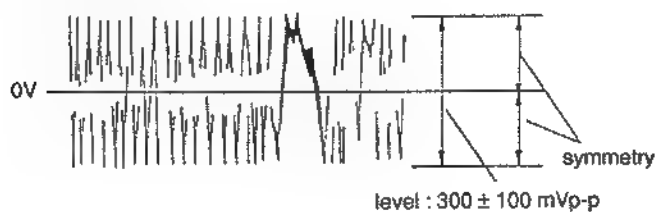
## E-F Balance Check



### Procedure :

1. Connect test point TP (ADJ) on Main board to GND with a lead wire.
2. Connect oscilloscope to test point TP (TEO).
3. Turned Power switch on.
4. Put disc (YEDS-18) in and playback.
5. Confirm that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0Vdc, and check this level.

### Traverse waveform



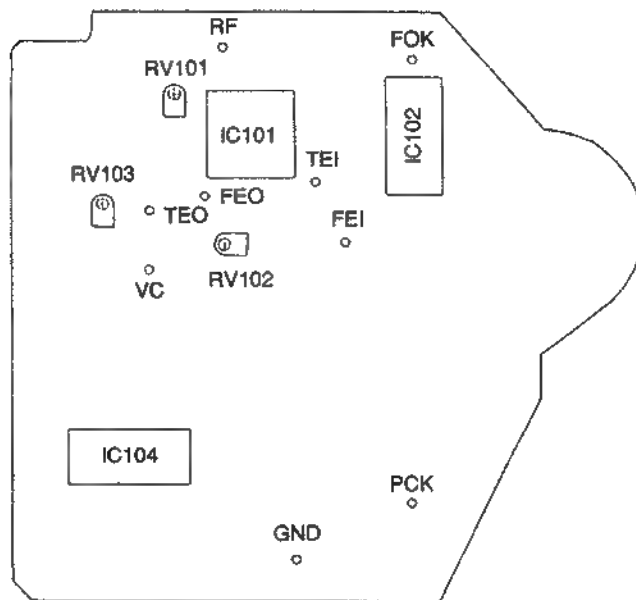
6. Remove the lead wire connected in step 1.

### Focus/Tracking Gain Adjustment (RV102, RV103)

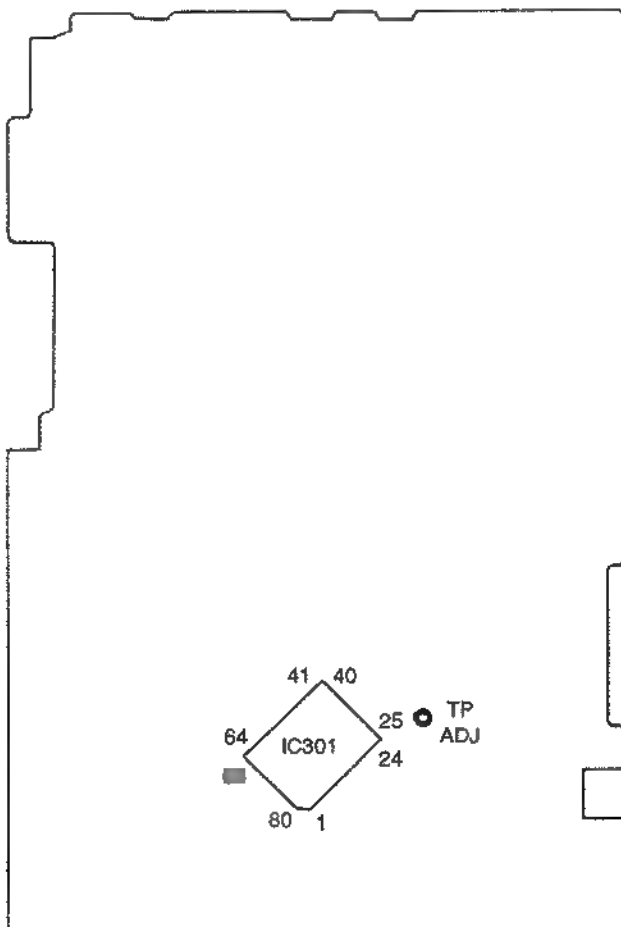
This gain has a margin, so even if it is slightly off. There is no problem. Therefore, do not perform this adjustment. Please note that it should be fixed to mechanical center position when you moved and do not know original position.

## Adjustment Location :

### [BD BOARD] (Conductor Side)



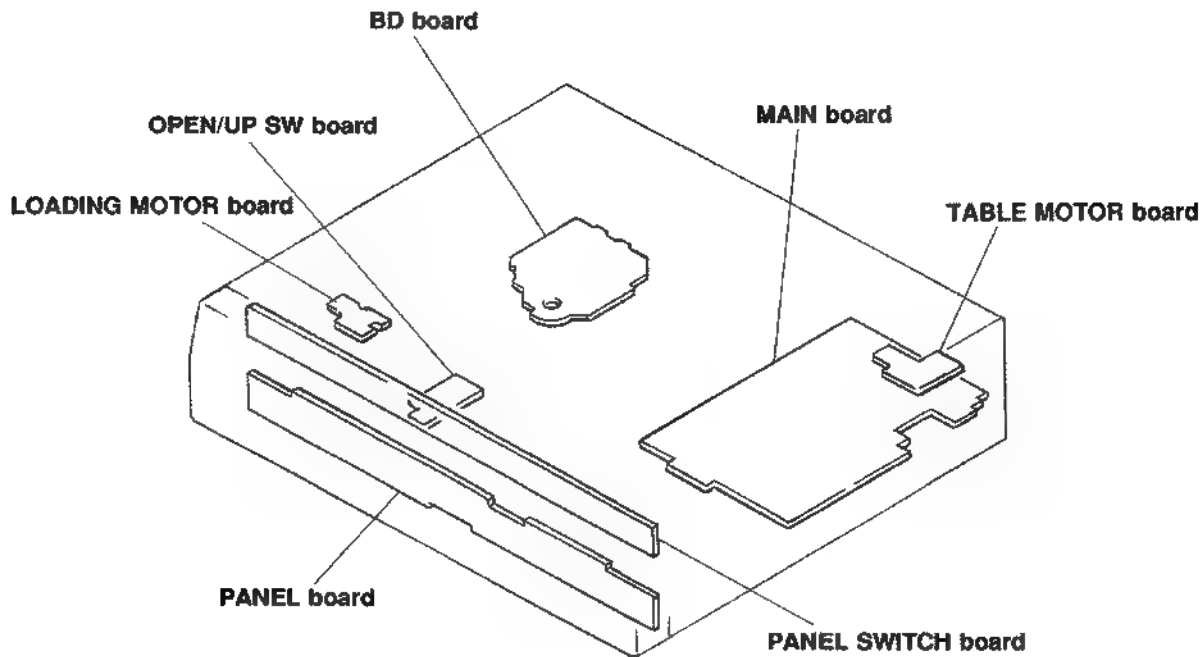
### [MAIN BOARD] (Conductor Side)





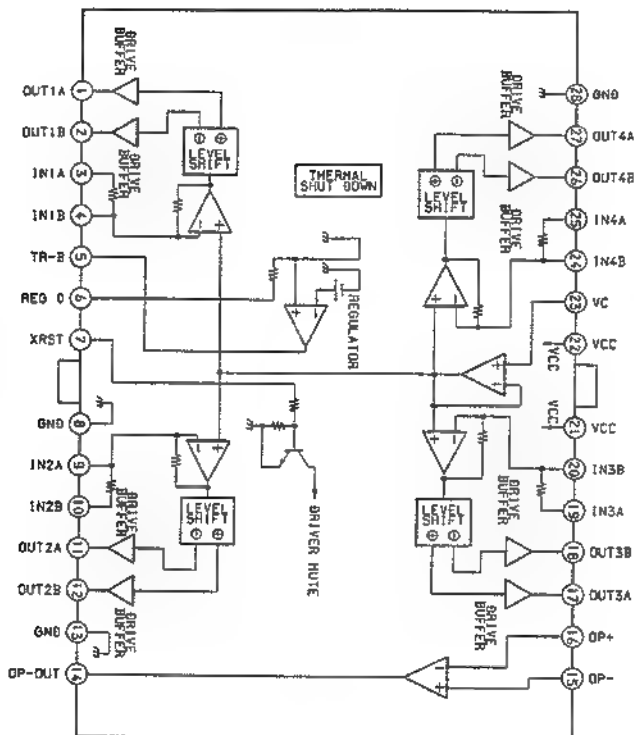
## SECTION 4 DIAGRAMS

### 4-1. CIRCUIT BOARDS LOCATIONS

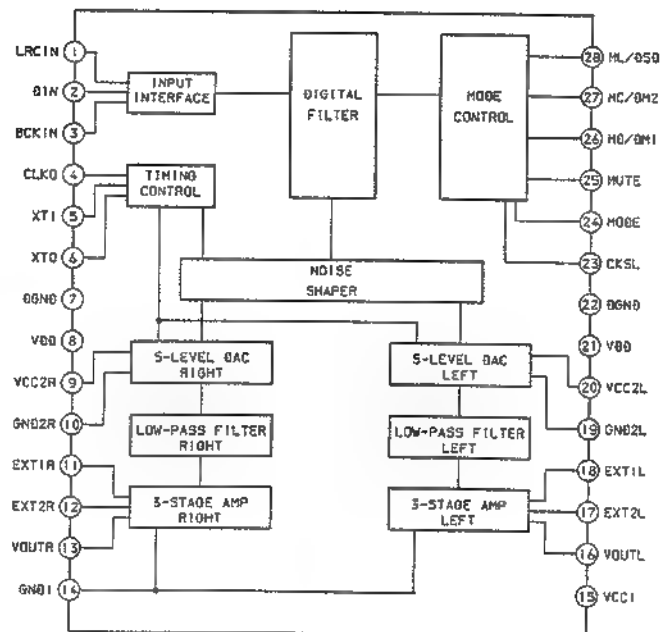


### 4-2. IC BLOCK DIAGRAMS

IC102 BA6397FP



IC104 PCM1710U



[illegible]

4-3. PRINTED WIRING BOARD — BD SECTION —  
• See page 9 for Circuit Boards Location.



• Semiconductor Location

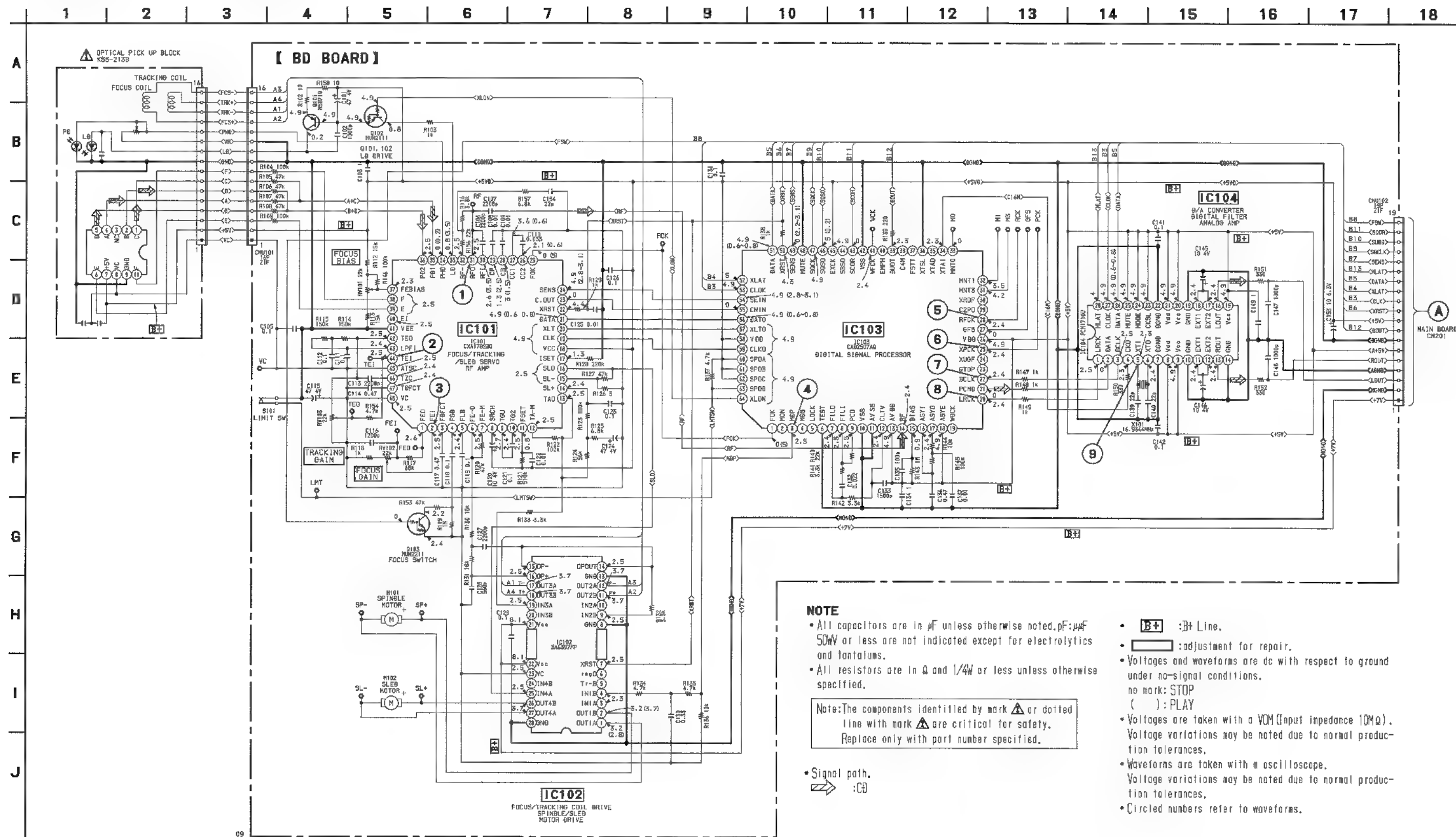
Ref. No.	Location
IC101	E-9
IC102	C-8
IC103	E-3
IC104	F-11
Q101	D-6
Q102	D-7
Q103	F-6

Note:

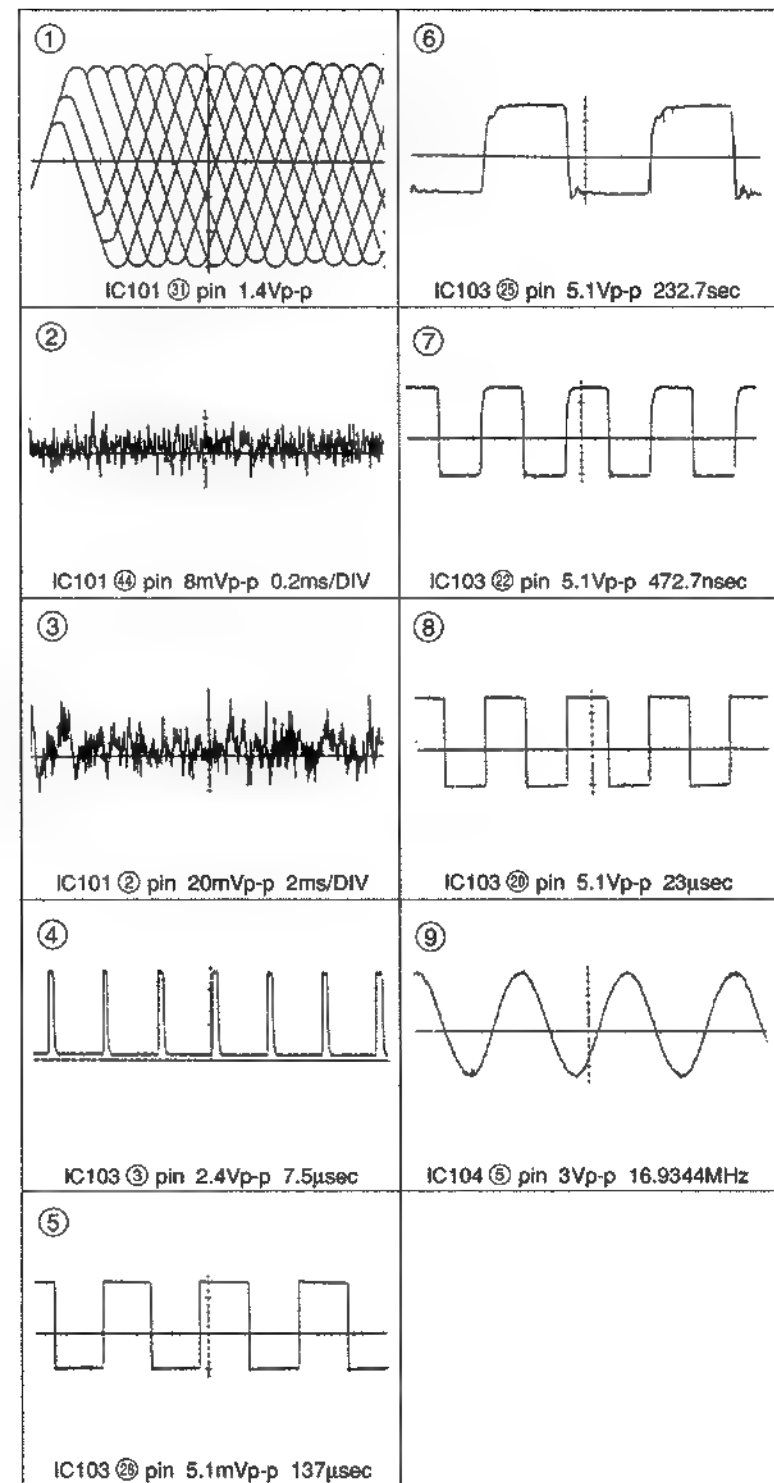
- parts extracted from the component side.
- Through hole.
- ▨ Pattern from the side which enable seeing.  
(The other layer's patterns are not indicated.)

#### 4-4. SCHEMATIC DIAGRAM — BD SECTION —

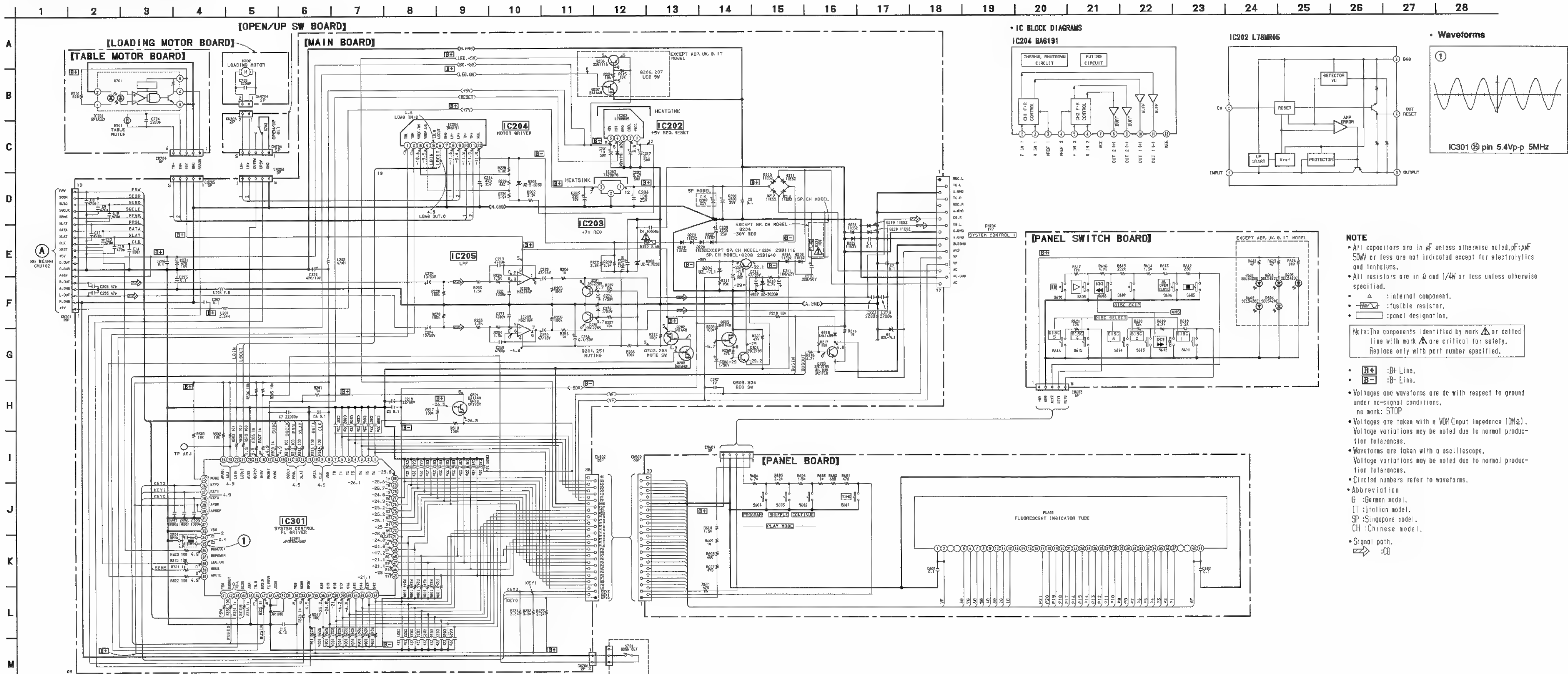
• See page 9 for IC BLOCK DIAGRAMS.



#### • Waveforms

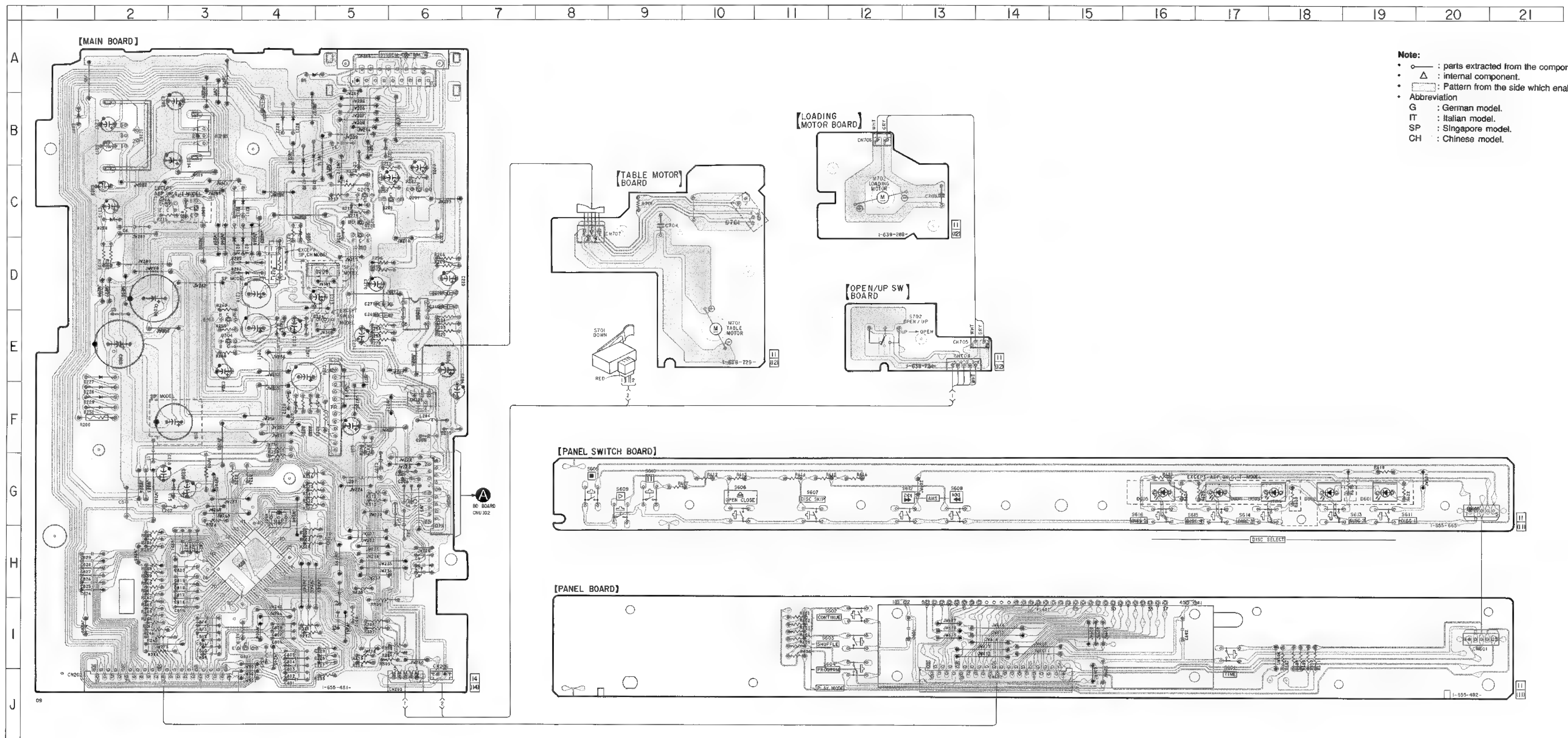


4-5. SCHEMATIC DIAGRAM — MAIN SECTION —  
• See page 22 for IC Pin Function. (IC301)





4-6. PRINTED WIRING BOARD — MAIN SECTION —  
• See page 9 for Circuit Boards Location.



• Semiconductor Location

Ref. No.	Location
D1	A-4
D201	B-1
D202	F-4
D204	D-4
D205	D-3
D206	D-3
D207	E-4
D208	C-2
D210	D-4
D211	C-4
D212	D-3
D213	C-3
D218	C-5
D219	C-5
D220	C-4
D221	B-4
D222	B-4
D227	F-1
D228	F-1
D229	F-1
D230	F-1
D601	G-19
D602	G-18
D603	G-18
D604	G-17
D605	G-16
D701	C-10
IC202	B-2
IC203	B-3
IC204	E-5
IC205	E-6
IC301	H-4
Q201	C-6
Q202	C-5
Q203	D-5
Q204	E-5
Q205	C-5
Q206	C-2
Q207	C-3
Q208	D-5
Q251	C-6
Q301	I-4
Q303	E-3
Q304	E-3

## 4-5. IC PIN FUNCTION

### • IC301 SYSTEM CONTROL, FL DRIVER ( $\mu$ PD78044AGF)

Pin No.	Pin Name	I/O	Function
1	T6	O	FL display grid output
2	T5	O	
3	T4	O	
4	T3	O	
5	T2	O	
6	T1	O	
7	T0	O	
8	VDD	—	+5V power supply
9	CLK	O	Serial clock output to DSP (CXD-2507AQ)
10	DATA	O	Serial data output to DSP (CXD-2507AQ)
11	—	—	Fixed at GND
12	XLAT	O	Serial data latch pulse output to DSP (CXD-2507AQ)
13	PRGL	O	Serial data latch pulse output to D/F DAC (PCM-1710U)
14	SQCLK	O	Subcode Q data read clock output to DSP (CXD-2507AQ)
15	—	—	Not used (open)
16	SUBQ	I	Subcode Q data input from DSP (CXD-2507AQ)
17	RESET	I	System reset input ("L"=Active)
18	INSW	I	S701 (loading-in switch) input
19	OUTSW	I	S702 (loading-out switch) input
20	AVss	—	GND
21	LDOUT	O	Output for rotating M702 (loading motor) in the loading-out direction
22	LDIN	O	Output for rotating M702 (loading motor) in the loading-in direction
23	ADJ	I	Test mode input. "L"=Stops GFS check.
24	APADJ	I	Test mode input. Fixed at "H" ("L":Test mode)
25	MODE	I	Not used (Fixed at "H")
26	KEY2	I	Key AD input
27	KEY1	I	
28	KEY0	I	
29	AVDD	—	+5V power supply
30	AVREF	—	
31	—	—	Fixed at GND
32	—	—	Not used (open)
33	Vss	—	GND
34	X1	I	Clock (5MHz)
35	X2	O	
36	BDRESET	O	BD reset output
37	BDPOWER	O	Not used
38	LED ON	O	LED drive signal
39	SENS	I	SENS input from DSP (CXD-2507AQ)
40	AMUTE	O	Muting ON/OFF output

Pin No.	Pin Name	I/O	Function
41	FSW	O	Focus control signal
42	BSOUT	O	Audio bus output
43	TBL	O	Table motor control
44	SCOR	I	Subcode sync S0+S1 detection input
45	JOG1	I	JOG input (Fixed "L")
46	TBR	O	Table motor control
47	BSIN	I	Audio bus input
48	IC (VPP)	—	Connect to GND
49	JOG0	I	JOG input (Fixed "L")
50	——	—	Fixed "L"
51	——	—	Not used (open)
52	VDD	—	+5V power supply
53	SENS	—	Slit sensor of disc table input
54	UPSW	—	Disc table up det
55	——	—	Not used
56	S20	O	FL display segment output
57	S19	O	
58	S18	O	
59	S17	O	
60	S16	O	
61	S15	O	
62	S14	O	
63	S13	O	
64	S12	O	
65	S11	O	
66	S10	O	
67	S9	O	
68	S8	O	
69	S7	O	
70	S6	O	
71	VLOAD	—	-30V power supply for driving FL display
72	S5	O	FL display segment output
73	S4	O	
74	S3	O	
75	S2	O	
76	S1	O	
77	S0	O	FL display grid output
78	T9	O	
79	T8	O	
■	T7	O	



## SECTION 5 EXPLODED VIEWS

### NOTE:

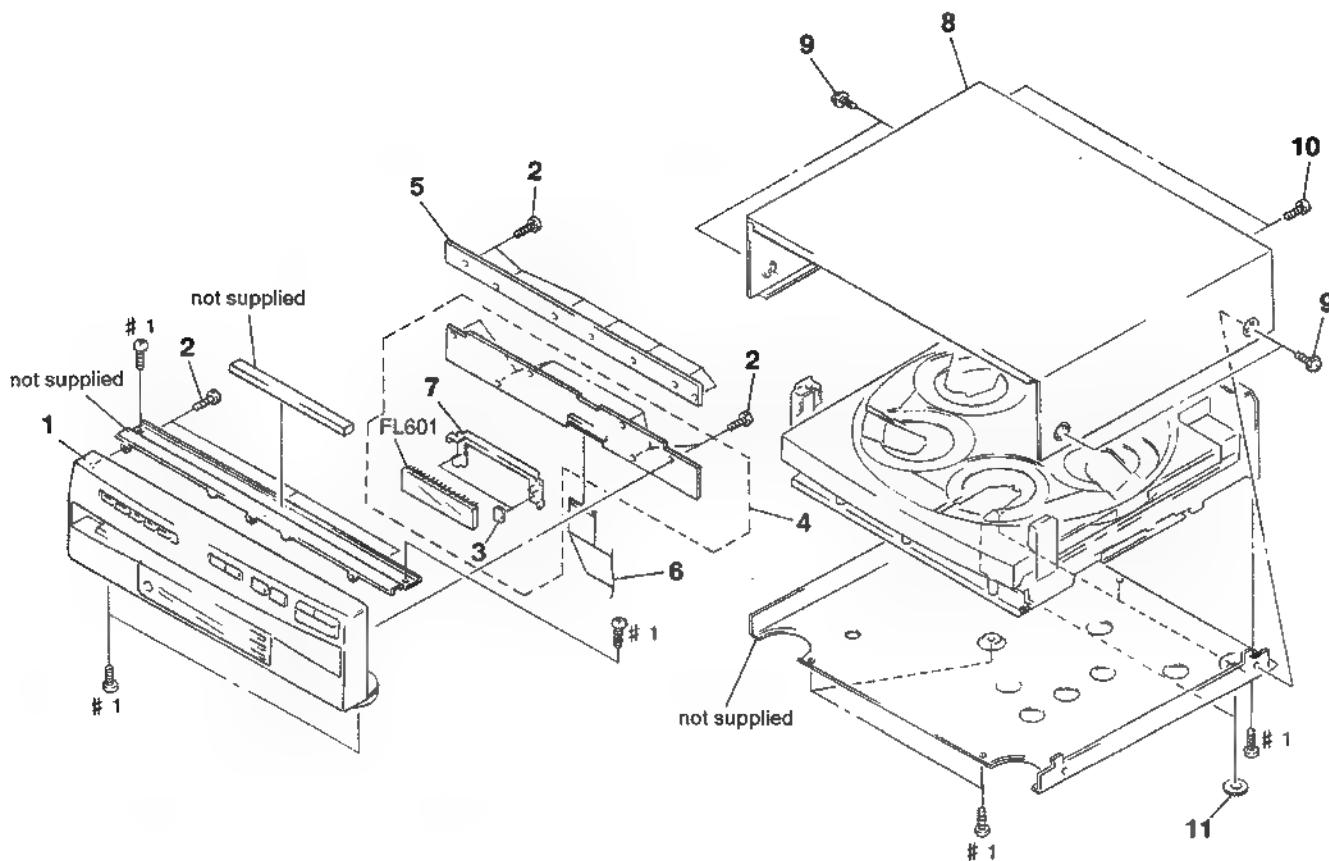
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.

### • Abbreviation

EA : Saudi Arabia model  
G : German model  
IT : Italian model  
MX : Mexican model  
SP : Singapore model  
MY : Malaysia model  
AUS : Australian model  
CH : Chinese model  
AR : Argentine model

The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

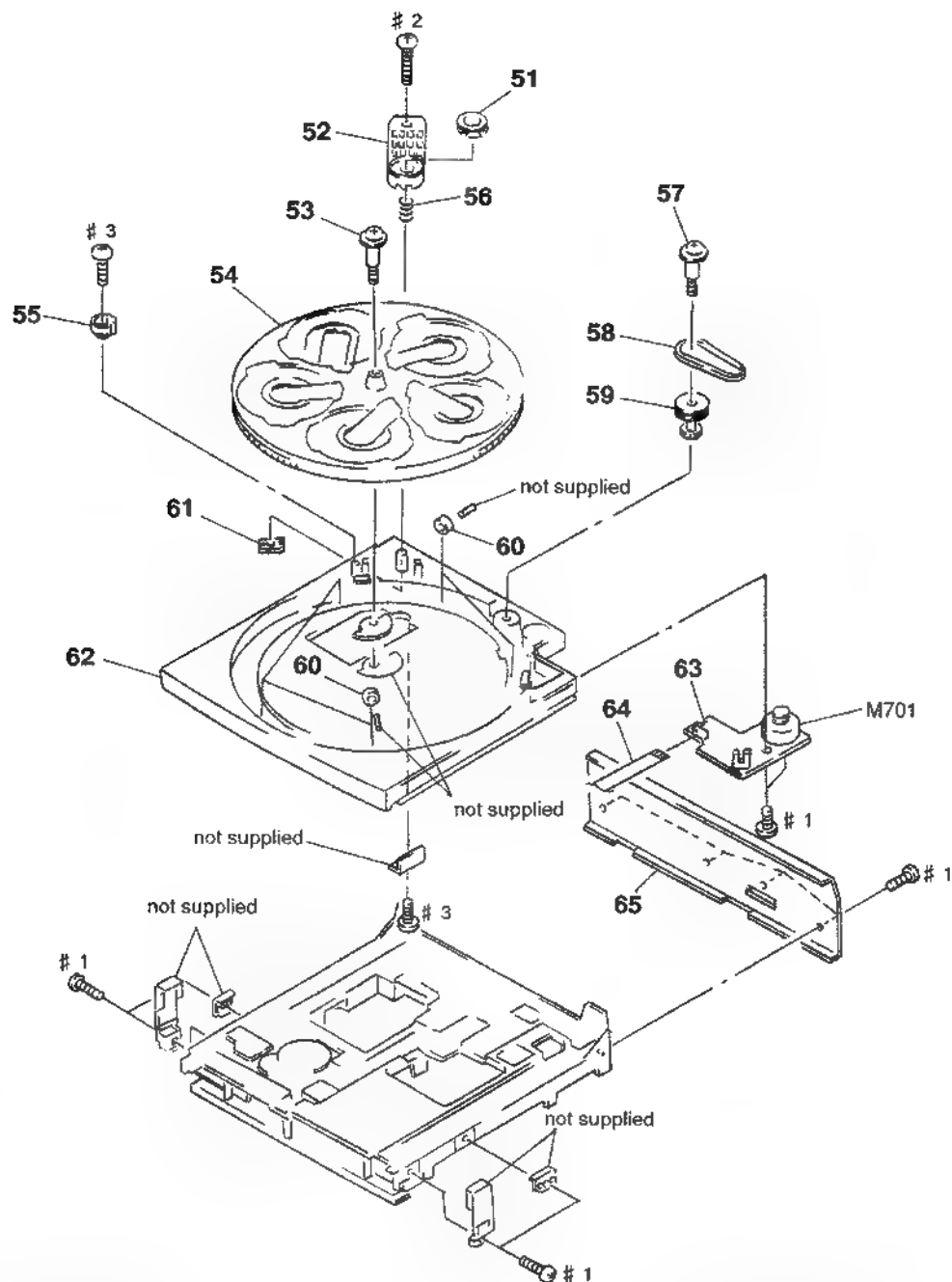
### 5-1. CASE AND FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
1	X-4945-742-1	PANEL ASSY, FRONT (AEP, UK, G, IT)	
1	X-4945-743-1	PANEL ASSY, FRONT (EXCEPT AEP, UK, G, IT)	
2	4-951-620-01	SCREW (2.6X8), +BVTP	
* 3	4-921-941-01	CUSHION (FL)	
* 4	1-655-482-11	PANEL BOARD	
* 5	1-655-665-11	PANEL SWITCH BOARD	
■	1-769-507-31	WIRE (FLAT TYPE) (37 CORE)	

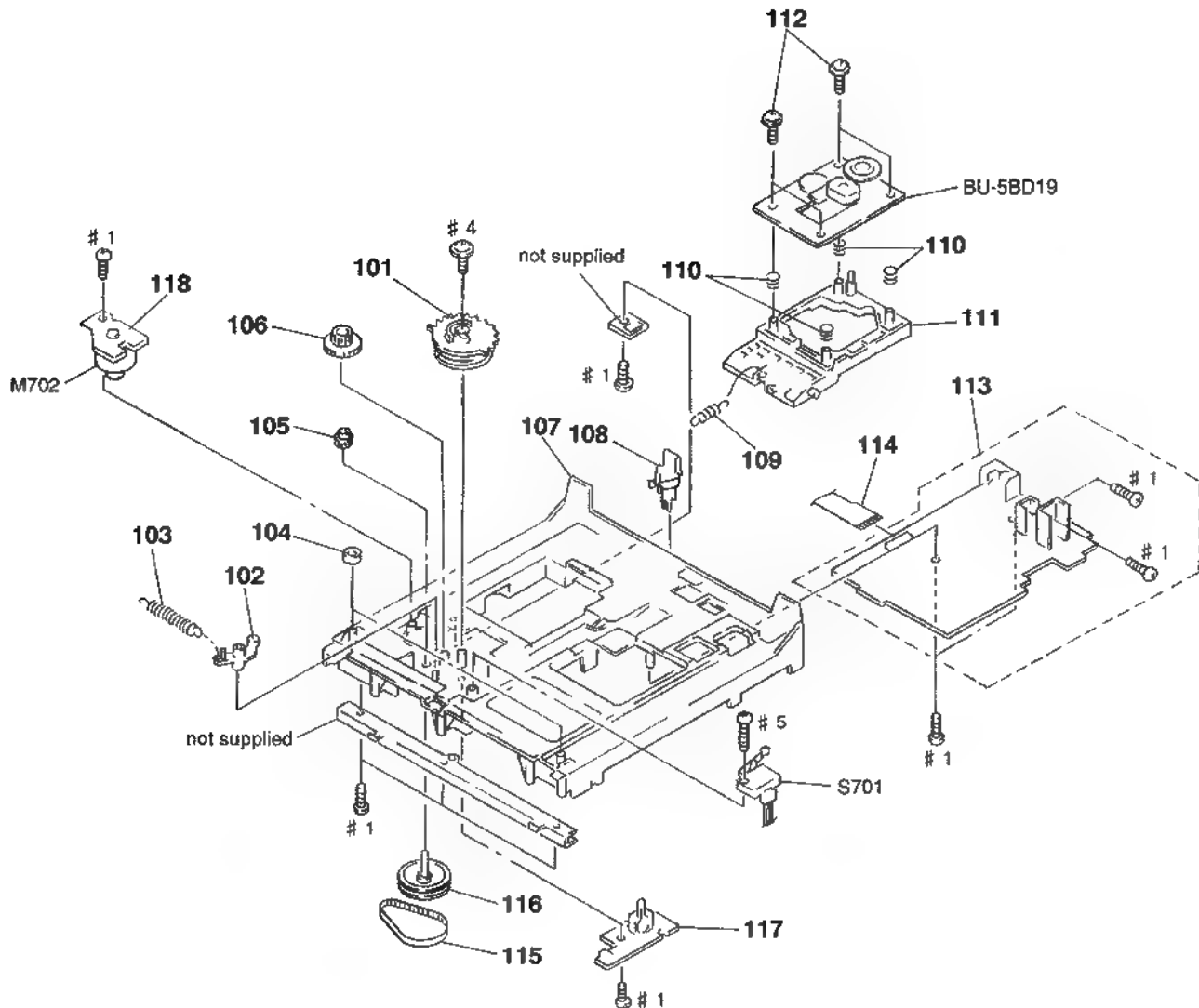
Ref. No.	Part No.	Description	Remark
* 7	4-955-792-21	HOLDER (5M), FL TUBE	
8	4-943-992-21	CASE	
9	3-704-366-01	SCREW (CASE) (M3X8)	
10	3-703-685-21	SCREW (+BV 3X8)	
11	4-924-410-01	FELT	
FL601	1-519-721-31	INDICATOR TUBE, FLUORESCENT	

## 5-2. DISC TABLE SECTION



Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
* 51	1-452-538-11	MAGNET		* 61	4-926-388-01	BRACKET (ADJUSTMENT)	
* 52	4-930-506-02	BRACKET (PRESS PULLEY)		62	4-955-787-81	TABLE, DISC	
53	4-926-384-01	SCREW, STEP		63	1-638-729-11	TABLE MOTOR BOARD	
* 54	4-926-383-01	TABLE (B), DISK		64	1-590-849-11	WIRE, FLAT TYPE (5 CORE)	
* 55	4-949-226-01	PLATE, LOCK		* 65	4-969-794-01	PANEL, BACK (AEP, UK, G, IT)	
56	4-926-395-01	SPRING, COMPRESSION		* 65	4-969-794-11	PANEL, BACK (E, SP, AR, MY, CH)	
57	4-923-597-01	SCREW, STEP		* 65	4-969-794-21	PANEL, BACK (EA, MX, AUS, PX)	
58	4-926-399-01	BELT		M701	A-4353-976-A	MOTOR ASSY, ROTARY (TABLE)	
59	4-934-380-01	PULLEY (R)					
60	X-4924-457-1	ROLLER ASSY					

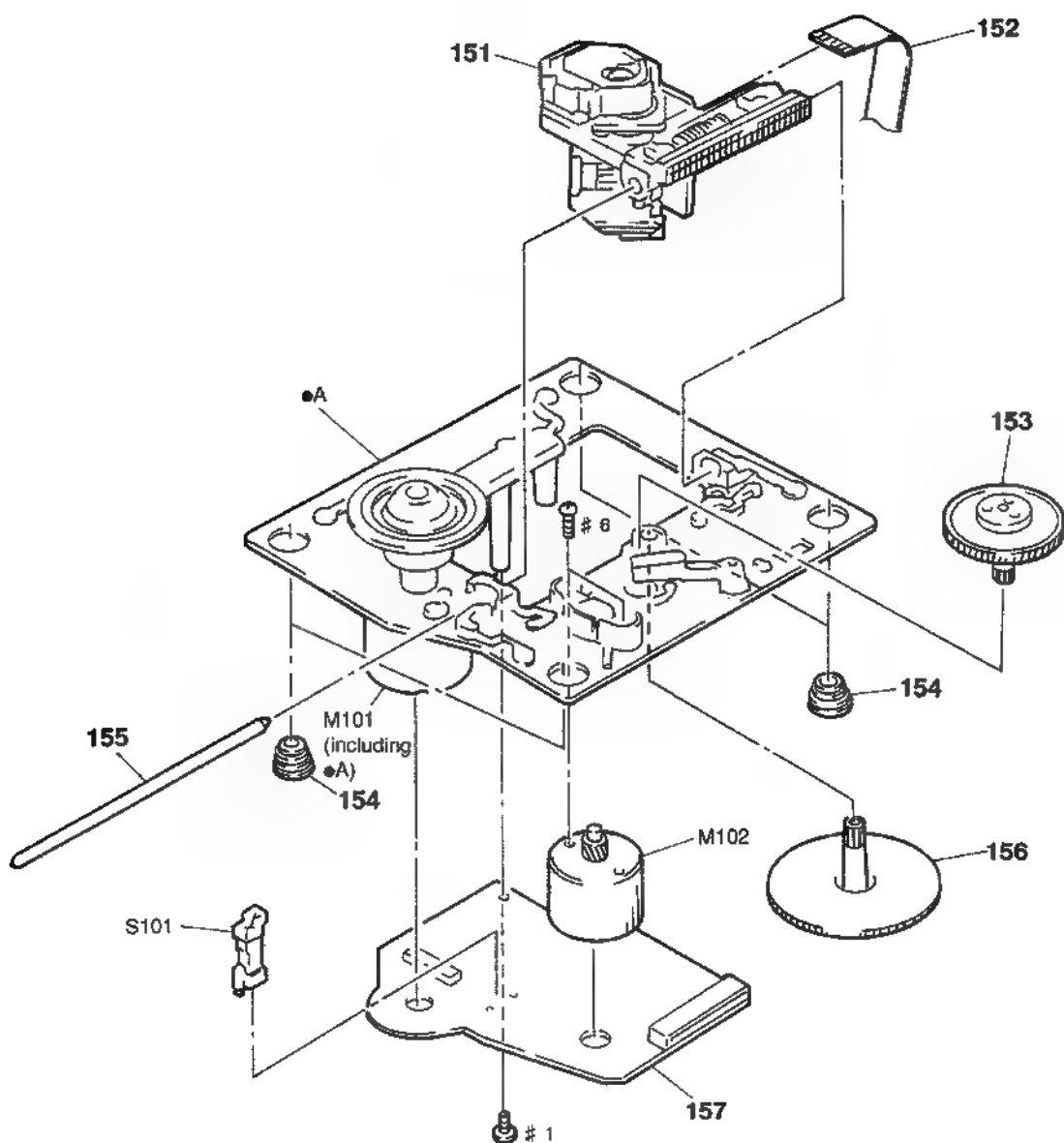
### 5-3. CHASSIS SECTION



Ref. No.	Part No.	Description
101	4-934-391-01	GEAR (LOADING A)
102	4-917-519-01	LEVER, SET
103	4-924-412-01	SPRING (B), TENSION
* 104	4-951-619-01	CUSHION (A)
105	4-934-375-01	GEAR (LOADING B)
106	4-934-381-01	GEAR (LOADING C)
* 107	4-943-997-31	CHASSIS
* 108	4-943-996-06	SPRING, LEAF
109	4-937-911-01	SPRING, TENSION
110	4-958-593-01	SPRING (BU), COMPRESSION
* 111	4-934-373-01	BRACKET (BU)

Ref. No.	Part No.	Description	Remark
112	4-933-134-01	SCREW (+PTPH M2.6X6)	
* 113	A-4673-489-A	MAIN BOARD, COMPLETE (ABP, UK, G, IT)	
* 113	A-4673-491-A	MAIN BOARD, COMPLETE (E, EA, MX, MY, AUS, PX, AR)	
* 113	A-4673-662-A	MAIN BOARD, COMPLETE (SP, CH)	
114	1-654-751-11	FLEXIBLE BOARD	
115	4-944-490-01	BELT (TIMING)	
116	X-4941-529-1	PULLEY ASSY	
117	1-638-731-11	OPEN/UP SW BOARD	
* 118	1-639-288-11	LOADING MOTOR BOARD	
M702	A-4353-974-A	MOTOR ASSY, LOADING	

## 5-4. BASE UNIT SECTION (BU-5BD19)



The components identified by mark ▲ or dotted line with mark ▲ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
▲151	8-848-387-01	OPTICAL PICK UP BLOCK KSS-213BA/S-N		156	4-917-564-01	GEAR (P), FLATNESS	
152	1-769-069-11	WIRE (FLAT TYPE) (16 CORE)		* 157	A-4673-402-A	BD BOARD, COMPLETE	
153	4-917-567-01	GEAR (M)		M101	X-4917-523-4	BASE (OUTSERT) ASSY (SPINDLE)	
154	4-951-940-01	INSULATOR (BU)		M102	X-4917-504-1	MOTOR ASSY (SLED)	
155	4-917-565-01	SHAFT, SLED		S101	1-572-085-11	SWITCH, LEAF (LIMIT)	

## SECTION 6

### ELECTRICAL PARTS LIST

## NOTE:

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- RESISTORS  
All resistors are in ohms  
METAL: Metal-film resistor  
METAL OXIDE: Metal Oxide-film resistor  
F: nonflammable
- SEMICONDUCTORS  
In each case, u:  $\mu$ , for example:  
uA...:  $\mu$ A..., uPA...:  $\mu$ PA..., uPB...:  $\mu$ PB...,  
uPC...:  $\mu$ PC..., uPD...:  $\mu$ PD...

- CAPACITORS  
uF:  $\mu$ F
- COILS  
uH:  $\mu$ H
- Abbreviation  
EA: Saudi Arabia model  
G: German model  
IT: Italian model  
MX: Mexican model  
SP: Singapore model  
MY: Malaysia model  
AUS: Australian model  
CH: Chinese model  
AR: Argentine model

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
*	A-4673-402-A	BD BOARD, COMPLETE *****		C142	1-163-038-91	CERAMIC CHIP 0.1uF	25V
		< CAPACITOR >		C145	1-135-201-11	TANTALUM CHIP 10uF	20% 4V
C101	1-126-607-11	ELECT CHIP 47uF	20% 4V	C146	1-135-201-11	TANTALUM CHIP 10uF	20% 4V
C102	1-163-275-11	CERAMIC CHIP 0.001uF	5% 50V	C147	1-163-275-11	CERAMIC CHIP 0.001uF	5% 50V
C103	1-164-346-11	CERAMIC CHIP 1uF	16V	C148	1-163-275-11	CERAMIC CHIP 0.001uF	5% 50V
C105	1-163-038-91	CERAMIC CHIP 0.1uF	25V	C149	1-164-346-11	CERAMIC CHIP 1uF	16V
C106	1-164-695-11	CERAMIC CHIP 0.0022uF	5% 50V	C153	1-135-259-11	TANTAL. CHIP 10uF	20% 6.3V
C107	1-164-695-11	CERAMIC CHIP 0.0022uF	5% 50V	C154	1-163-235-11	CERAMIC CHIP 22PF	5% 50V
C108	1-164-232-11	CERAMIC CHIP 0.01uF	50V			< CONNECTOR >	
C109	1-164-232-11	CERAMIC CHIP 0.01uF	50V	CNU101	1-770-014-11	CONNECTOR, FFC/FPC 16P	
C110	1-163-989-11	CERAMIC CHIP 0.033uF	10% 25V	CNU102	1-770-013-11	CONNECTOR, FFC/FPC 19P	
C111	1-163-038-91	CERAMIC CHIP 0.1uF	25V			< IC >	
C112	1-163-038-91	CERAMIC CHIP 0.1uF	25V	IC101	8-752-069-56	IC CXA1782BQ	
C113	1-164-695-11	CERAMIC CHIP 0.0022uF	5% 50V	IC102	8-759-291-06	IC BA6397FP	
C114	1-164-005-11	CERAMIC CHIP 0.47uF	25V	IC103	8-752-372-94	IC CXD2507AQ	
C115	1-126-607-11	ELECT CHIP 47uF	20% 4V	IC104	8-759-185-29	IC PCM1710U-B	
C116	1-163-143-00	CERAMIC CHIP 0.0012uF	5% 50V			< TRANSISTOR >	
C117	1-164-005-11	CERAMIC CHIP 0.47uF	25V	Q101	8-729-010-08	TRANSISTOR MSB710-R	
C118	1-163-038-91	CERAMIC CHIP 0.1uF	25V	Q102	8-729-424-08	TRANSISTOR UN2111	
C119	1-163-038-91	CERAMIC CHIP 0.1uF	25V	Q103	8-729-421-22	TRANSISTOR UN2211	
C120	1-135-201-11	TANTALUM CHIP 10uF	20% 4V			< RESISTOR >	
C121	1-163-038-91	CERAMIC CHIP 0.1uF	25V	R102	1-216-001-00	METAL CHIP 10	5% 1/10W
C122	1-164-232-11	CERAMIC CHIP 0.01uF	50V	R103	1-216-049-91	METAL GLAZE 1K	5% 1/10W
C123	1-163-038-91	CERAMIC CHIP 0.1uF	25V	R104	1-216-097-91	METAL GLAZE 100K	5% 1/10W
C124	1-126-607-11	ELECT CHIP 47uF	20% 4V	R105	1-216-089-00	METAL CHIP 47K	5% 1/10W
C125	1-164-232-11	CERAMIC CHIP 0.01uF	50V	R106	1-216-089-00	METAL CHIP 47K	5% 1/10W
C126	1-163-038-91	CERAMIC CHIP 0.1uF	25V	R107	1-216-089-00	METAL CHIP 47K	5% 1/10W
C127	1-164-695-11	CERAMIC CHIP 0.0022uF	5% 50V	R108	1-216-089-00	METAL CHIP 47K	5% 1/10W
C128	1-163-135-00	CERAMIC CHIP 560PF	5% 50V	R109	1-216-097-91	METAL GLAZE 100K	5% 1/10W
C129	1-163-038-91	CERAMIC CHIP 0.1uF	25V	R112	1-216-077-00	METAL CHIP 15K	5% 1/10W
C130	1-164-336-11	CERAMIC CHIP 0.33uF	25V	R113	1-216-077-00	METAL CHIP 15K	5% 1/10W
C131	1-163-038-91	CERAMIC CHIP 0.1uF	25V	R114	1-216-101-00	METAL CHIP 150K	5% 1/10W
C132	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V	R115	1-216-101-00	METAL CHIP 150K	5% 1/10W
C133	1-163-145-00	CERAMIC CHIP 0.0015uF	5% 50V	R116	1-216-061-00	METAL CHIP 3.3K	5% 1/10W
C134	1-164-346-11	CERAMIC CHIP 1uF	16V	R117	1-216-093-00	METAL CHIP 68K	5% 1/10W
C135	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	R118	1-216-049-91	METAL GLAZE 1K	5% 1/10W
C136	1-164-005-11	CERAMIC CHIP 0.47uF	25V	R119	1-216-121-00	METAL CHIP 1M	5% 1/10W
C137	1-164-232-11	CERAMIC CHIP 0.01uF	50V	R120	1-216-089-00	METAL CHIP 47K	5% 1/10W
C139	1-163-235-11	CERAMIC CHIP 22PF	5% 50V				
C140	1-163-235-11	CERAMIC CHIP 22PF	5% 50V				
C141	1-163-038-91	CERAMIC CHIP 0.1uF	25V				

## MAIN

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C11	1-162-290-31 CERAMIC	470PF	10%	50V
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Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C12	1-162-290-31	CERAMIC	470PF 10% 50V	C807	1-162-207-31	CERAMIC	22PF 5% 50V
C13	1-162-290-31	CERAMIC	470PF 10% 50V	C808	1-162-207-31	CERAMIC	22PF 5% 50V
C14	1-162-282-31	CERAMIC	100PF 10% 50V	C809	1-162-207-31	CERAMIC	22PF 5% 50V
C15	1-164-159-11	CERAMIC	0.1uF 50V	C810	1-162-207-31	CERAMIC	22PF 5% 50V
C19	1-126-943-11	ELECT	2200uF 20% 25V (SP)	C811	1-162-207-31	CERAMIC	22PF 5% 50V
C201	1-124-907-11	ELECT	10uF 20% 50V	C812	1-162-207-31	CERAMIC	22PF 5% 50V
C202	1-124-465-00	ELECT	0.47uF 20% 50V	C813	1-162-207-31	CERAMIC	22PF 5% 50V
C203	1-126-923-11	ELECT	220uF 20% 10V	C814	1-162-207-31	CERAMIC	22PF 5% 50V
C204	1-124-478-11	ELECT	100uF 20% 25V	C815	1-162-207-31	CERAMIC	22PF 5% 50V
C205	1-162-215-31	CERAMIC	47PF 5% 50V	C816	1-162-207-31	CERAMIC	22PF 5% 50V
C206	1-164-159-11	CERAMIC	0.1uF 50V	C817	1-162-207-31	CERAMIC	22PF 5% 50V
C207	1-164-159-11	CERAMIC	0.1uF 50V	C818	1-162-207-31	CERAMIC	22PF 5% 50V
C208	1-128-548-11	ELECT	4700uF 20% 25V	C819	1-162-207-31	CERAMIC	22PF 5% 50V
C209	1-128-548-11	ELECT	4700uF 20% 25V	C820	1-162-207-31	CERAMIC	22PF 5% 50V
C210	1-126-969-11	ELECT	220uF 20% 50V	C821	1-162-207-31	CERAMIC	22PF 5% 50V
C211	1-128-576-11	ELECT	100uF 20% 63V	C822	1-162-207-31	CERAMIC	22PF 5% 50V
C212	1-126-947-11	ELECT	47uF 20% 35V	C823	1-162-207-31	CERAMIC	22PF 5% 50V
C213	1-124-907-11	ELECT	10uF 20% 50V	C824	1-162-207-31	CERAMIC	22PF 5% 50V
C214	1-126-941-11	ELECT	470uF 20% 25V	C825	1-162-207-31	CERAMIC	22PF 5% 50V
C215	1-124-443-00	ELECT	100uF 20% 10V	C826	1-162-207-31	CERAMIC	22PF 5% 50V
C217	1-124-463-00	ELECT	0.1uF 20% 50V	C827	1-162-207-31	CERAMIC	22PF 5% 50V
C218	1-124-916-11	ELECT	22uF 20% 63V	C828	1-162-207-31	CERAMIC	22PF 5% 50V
C219	1-130-479-00	MYLAR	0.0047uF 5% 50V	C829	1-162-207-31	CERAMIC	22PF 5% 50V
C220	1-104-664-11	ELECT	47uF 20% 16V	< CONNECTOR >			
C221	1-130-472-00	MYLAR	0.0012uF 5% 50V	* CN201	1-568-862-11	SOCKET, CONNECTOR 19P	
C222	1-126-925-11	ELECT	470uF 20% 10V	* CN202	1-691-902-21	CONNECTOR, FFC/FPC 37P	
C223	1-162-302-11	CERAMIC	0.0022uF 30% 16V	* CN203	1-568-943-11	PIN, CONNECTOR 5P	
C224	1-124-907-11	ELECT	10uF 20% 50V	CN204	1-764-017-11	HOUSING, CONNECTOR(PC BOARD) 17P	
C225	1-164-159-11	CERAMIC	0.1uF 50V	* CN205	1-568-824-11	SOCKET, CONNECTOR 5P	
C226	1-124-903-11	ELECT	1uF 20% 50V	< DIODE >			
C227	1-162-294-31	CERAMIC	0.001uF 10% 50V	D1	8-719-000-75	DIODE	UZL-7L1
C228	1-162-294-31	CERAMIC	0.001uF 10% 50V	D201	8-719-987-63	DIODE	1N4148M
C229	1-162-294-31	CERAMIC	0.001uF 10% 50V	D202	8-719-010-42	DIODE	UZ-5.6BSB
C231	1-126-925-11	ELECT	470uF 20% 10V	D204	8-719-000-75	DIODE	UZL-7L1
C255	1-162-215-31	CERAMIC	47PF 5% 50V	D205	8-719-024-99	DIODE	11ES2-NTA2B
C257	1-136-177-00	FILM	1uF 5% 50V	D206	8-719-024-99	DIODE	11ES2-NTA2B
C266	1-124-463-00	ELECT	0.1uF 20% 50V	D207	8-719-013-67	DIODE	UZ-30BSD
C269	1-130-479-00	MYLAR	0.0047uF 5% 50V	D208	8-719-010-33	DIODE	UZ-4.7BSB
C270	1-104-664-11	ELECT	47uF 20% 16V	D210	8-719-024-99	DIODE	11ES2-NTA2B
C271	1-130-472-00	MYLAR	0.0012uF 5% 50V	D211	8-719-024-99	DIODE	11ES2-NTA2B
C273	1-162-302-11	CERAMIC	0.0022uF 30% 16V	D212	8-719-024-99	DIODE	11ES2-NTA2B
C274	1-124-907-11	ELECT	10uF 20% 50V	D213	8-719-024-99	DIODE	11ES2-NTA2B
C276	1-124-903-11	ELECT	1uF 20% 50V	D218	8-719-987-63	DIODE	1N4148M
C306	1-124-903-11	ELECT	1uF 20% 50V	D219	8-719-024-99	DIODE	11ES2-NTA2B
C801	1-162-207-31	CERAMIC	22PF 5% 50V	D220	8-719-024-99	DIODE	11ES2-NTA2B
C802	1-162-207-31	CERAMIC	22PF 5% 50V	D221	8-719-024-99	DIODE	11ES2-NTA2B
C803	1-162-207-31	CERAMIC	22PF 5% 50V	D222	8-719-024-99	DIODE	11ES2-NTA2B
C804	1-162-207-31	CERAMIC	22PF 5% 50V	D227	8-719-024-99	DIODE	11ES2-NTA2B
C805	1-162-207-31	CERAMIC	22PF 5% 50V	D228	8-719-024-99	DIODE	11ES2-NTA2B
C806	1-162-207-31	CERAMIC	22PF 5% 50V				

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
D229	8-719-024-99	DIODE 11ES2-NTA2B		R219	1-249-429-11	CARBON 10K 5% 1/4W	
D230	8-719-024-99	DIODE 11ES2-NTA2B		R220	1-249-441-11	CARBON 100K 5% 1/4W	
	< IC >			△R221	1-212-881-11	FUSIBLE 100 5% 1/4W F	(EXCEPT SP, CH)
IC202	8-759-820-84	IC L78MR05		R222	1-249-423-11	CARBON 3.3K 5% 1/4W F	
IC203	8-759-071-48	IC TA7807S		R228	1-247-834-11	CARBON 1.3K 5% 1/4W	
IC204	8-759-172-31	IC BA6191		R229	1-249-415-11	CARBON 680 5% 1/4W F	
IC205	8-759-634-51	IC M5218AP		R230	1-249-424-11	CARBON 3.9K 5% 1/4W F	
IC301	8-759-332-67	IC uPD78044AGF-101-3B9		R231	1-249-423-11	CARBON 3.3K 5% 1/4W F	
	< COIL >			R232	1-249-423-11	CARBON 3.3K 5% 1/4W F	
L201	1-410-322-11	INDUCTOR 3.3uH		R233	1-249-423-11	CARBON 3.3K 5% 1/4W F	
L202	1-410-517-11	INDUCTOR 47uH		R234	1-249-429-11	CARBON 10K 5% 1/4W	(EXCEPT ABP, UK, G, IT)
L204	1-412-473-21	INDUCTOR 0uH		R235	1-249-441-11	CARBON 100K 5% 1/4W	
	< TRANSISTOR >			R236	1-249-441-11	CARBON 100K 5% 1/4W	
Q201	8-729-119-78	TRANSISTOR 2SC403SP-51		R237	1-249-441-11	CARBON 100K 5% 1/4W	
Q202	8-729-422-57	TRANSISTOR UN4111		R238	1-249-441-11	CARBON 100K 5% 1/4W	
Q203	8-729-900-80	TRANSISTOR DTC114ES		R239	1-249-441-11	CARBON 100K 5% 1/4W	
Q204	8-729-030-19	TRANSISTOR 2SB1640 (SP, CH)		R240	1-249-441-11	CARBON 100K 5% 1/4W	
Q205	8-729-119-78	TRANSISTOR 2SC403SP-51 (EXCEPT SP, CH)		R241	1-249-441-11	CARBON 100K 5% 1/4W	
Q206	8-729-140-04	TRANSISTOR 2SB1116A-L		R242	1-249-441-11	CARBON 100K 5% 1/4W	
		(EXCEPT ABP, UK, G, IT)		R243	1-249-441-11	CARBON 100K 5% 1/4W	
Q207	8-729-900-80	TRANSISTOR DTC114ES		R244	1-249-441-11	CARBON 100K 5% 1/4W	
		(EXCEPT ABP, UK, G, IT)		R245	1-249-441-11	CARBON 100K 5% 1/4W	
Q208	8-729-140-04	TRANSISTOR 2SB1116A-L (EXCEPT SP, CH)		R246	1-249-441-11	CARBON 100K 5% 1/4W	
Q251	8-729-119-78	TRANSISTOR 2SC403SP-51		R247	1-249-441-11	CARBON 100K 5% 1/4W	
Q301	8-729-900-80	TRANSISTOR DTC114ES		R248	1-249-441-11	CARBON 100K 5% 1/4W	
Q303	8-729-900-63	TRANSISTOR DTA124ES		R249	1-249-441-11	CARBON 100K 5% 1/4W	
Q304	8-729-119-78	TRANSISTOR 2SC403SP-51		R250	1-249-417-11	CARBON 1K 5% 1/4W F	
	< RESISTOR >			R253	1-249-419-11	CARBON 1.5K 5% 1/4W F	
△R200	1-219-139-11	FUSIBLE 0.68 10% 1/4W		R254	1-249-419-11	CARBON 1.5K 5% 1/4W F	
R201	1-249-417-11	CARBON 1K 5% 1/4W F		R255	1-249-441-11	CARBON 100K 5% 1/4W	
R202	1-249-423-11	CARBON 3.3K 5% 1/4W F		R256	1-249-417-11	CARBON 1K 5% 1/4W F	
R203	1-249-419-11	CARBON 1.5K 5% 1/4W F		R257	1-249-429-11	CARBON 10K 5% 1/4W	
R204	1-249-419-11	CARBON 1.5K 5% 1/4W F		R258	1-249-441-11	CARBON 100K 5% 1/4W	
R205	1-249-441-11	CARBON 100K 5% 1/4W		R259	1-249-437-11	CARBON 47K 5% 1/4W	
R206	1-249-417-11	CARBON 1K 5% 1/4W F		R260	1-249-437-11	CARBON 47K 5% 1/4W	
R207	1-249-429-11	CARBON 10K 5% 1/4W		R270	1-249-441-11	CARBON 100K 5% 1/4W	
R208	1-249-441-11	CARBON 100K 5% 1/4W		R301	1-249-429-11	CARBON 10K 5% 1/4W	
R209	1-249-423-11	CARBON 3.3K 5% 1/4W F		R302	1-249-429-11	CARBON 10K 5% 1/4W	
R210	1-249-425-11	CARBON 4.7K 5% 1/4W F		R303	1-249-429-11	CARBON 10K 5% 1/4W	
R211	1-249-431-11	CARBON 15K 5% 1/4W		R304	1-249-429-11	CARBON 10K 5% 1/4W	
R212	1-249-441-11	CARBON 100K 5% 1/4W		R305	1-249-429-11	CARBON 10K 5% 1/4W	
R214	1-249-393-11	CARBON 10 5% 1/4W F		R306	1-249-417-11	CARBON 1K 5% 1/4W F	
R215	1-249-429-11	CARBON 10K 5% 1/4W		R307	1-249-417-11	CARBON 1K 5% 1/4W F	
		(EXCEPT ABP, UK, G, IT)		R308	1-247-807-31	CARBON 100 5% 1/4W	
R217	1-249-429-11	CARBON 10K 5% 1/4W		R309	1-249-417-11	CARBON 1K 5% 1/4W F	
R218	1-249-425-11	CARBON 4.7K 5% 1/4W F		R310	1-247-807-31	CARBON 100 5% 1/4W	
				R311	1-247-807-31	CARBON 100 5% 1/4W	
				R312	1-247-807-31	CARBON 100 5% 1/4W	

The components identified by mark △ or dotted line with mark △ are critical for safety.  
Replace only with part number specified.



# MAIN PANEL PANEL SWITCH

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
R313	1-247-807-31	CARBON 100 5% 1/4W		R604	1-249-419-11	CARBON 1.5K 5% 1/4W F	
R314	1-247-807-31	CARBON 100 5% 1/4W		R605	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R315	1-247-807-31	CARBON 100 5% 1/4W					
R316	1-249-417-11	CARBON 1K 5% 1/4W F		R606	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R317	1-249-441-11	CARBON 100K 5% 1/4W		R607	1-249-413-11	CARBON 470 5% 1/4W F	
				R608	1-249-415-11	CARBON 680 5% 1/4W F	
R318	1-249-441-11	CARBON 100K 5% 1/4W		R609	1-249-417-11	CARBON 1K 5% 1/4W F	
R319	1-247-807-31	CARBON 100 5% 1/4W		R610	1-249-419-11	CARBON 1.5K 5% 1/4W F	
R320	1-247-807-31	CARBON 100 5% 1/4W					
R321	1-249-417-11	CARBON 1K 5% 1/4W F		R611	1-249-413-11	CARBON 470 5% 1/4W F	
R322	1-247-807-31	CARBON 100 5% 1/4W		R612	1-249-415-11	CARBON 680 5% 1/4W F	
				R613	1-249-417-11	CARBON 1K 5% 1/4W F	
R323	1-247-807-31	CARBON 100 5% 1/4W		R614	1-249-419-11	CARBON 1.5K 5% 1/4W F	
R324	1-249-417-11	CARBON 1K 5% 1/4W F		R615	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R325	1-249-417-11	CARBON 1K 5% 1/4W F					
R326	1-249-417-11	CARBON 1K 5% 1/4W F		R616	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R338	1-249-429-11	CARBON 10K 5% 1/4W		R617	1-249-430-11	CARBON 12K 5% 1/4W	
				R618	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R341	1-247-807-31	CARBON 100 5% 1/4W		R619	1-249-425-11	CARBON 4.7K 5% 1/4W F	
				R620	1-249-430-11	CARBON 12K 5% 1/4W	
< VIBRATOR >				R621	1-249-430-11	CARBON 12K 5% 1/4W	
X301	1-579-233-11	VIBRATOR, CERAMIC (5MHz)		R622	1-249-401-11	CARBON 47 5% 1/4W F	(EXCEPT AEP, UK, G, IT)
*****				R623	1-249-401-11	CARBON 47 5% 1/4W F	(EXCEPT AEP, UK, G, IT)
*	1-655-482-11	PANEL BOARD		R624	1-249-408-11	CARBON 180 5% 1/4W F	(EXCEPT AEP, UK, G, IT)
		*****					
*	1-655-665-11	PANEL SWITCH BOARD		< SWITCH >			
		*****		S601	1-571-760-11	SWITCH, KEY BOARD (TIME)	
				S602	1-571-760-11	SWITCH, KEY BOARD (CONTINUE)	
				S603	1-571-760-11	SWITCH, KEY BOARD (SHUFFLE)	
				S604	1-571-760-11	SWITCH, KEY BOARD (PROGRAM)	
				S605	1-571-760-11	SWITCH, KEY BOARD (■)	
				S606	1-571-760-11	SWITCH, KEY BOARD (△ OPEN/CLOSE)	
				S607	1-571-760-11	SWITCH, KEY BOARD (DISC SKIP)	
				S608	1-571-760-11	SWITCH, KEY BOARD (◀◀◀)	
				S609	1-571-760-11	SWITCH, KEY BOARD (▷)	
				S610	1-571-760-11	SWITCH, KEY BOARD (■)	
				S611	1-571-760-11	SWITCH, KEY BOARD (DISC 1)	
				S612	1-571-760-11	SWITCH, KEY BOARD (▶▶▶▷▷▷)	
				S613	1-571-760-11	SWITCH, KEY BOARD (DISC 2)	
				S614	1-571-760-11	SWITCH, KEY BOARD (DISC 3)	
				S615	1-571-760-11	SWITCH, KEY BOARD (DISC 4)	
				S616	1-571-760-11	SWITCH, KEY BOARD (DISC 5)	
				*****			
< CAPACITOR >							
C601	1-164-159-11	CERAMIC 0.1uF 50V					
C602	1-164-159-11	CERAMIC 0.1uF 50V					
< CONNECTOR >							
* CN202	1-691-902-21	CONNECTOR, PFC/FPC 37P					
< DIODE >							
D601	8-719-032-87	DIODE SEL5420S-TP (EXCEPT AEP, UK, G, IT)					
D602	8-719-032-87	DIODE SEL5420S-TP (EXCEPT AEP, UK, G, IT)					
D603	8-719-032-87	DIODE SEL5420S-TP (EXCEPT AEP, UK, G, IT)					
D604	8-719-032-87	DIODE SEL5420S-TP (EXCEPT AEP, UK, G, IT)					
D605	8-719-032-87	DIODE SEL5420S-TP (EXCEPT AEP, UK, G, IT)					
< FLUORESCENT INDIATOR >							
FL601	1-519-721-31	INDICATOR TUBE, FLUORESCENT					
< RESISTOR >							
R601	1-249-413-11	CARBON 470 5% 1/4W F					
R602	1-249-415-11	CARBON 680 5% 1/4W F					
R603	1-249-417-11	CARBON 1K 5% 1/4W F					

Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS *****	
6	1-769-507-31	WIRE (FLAT TYPE) (37 CORE)	
* 51	1-452-538-11	MAGNET	
64	1-590-849-11	WIRE, FLAT TYPE (5 CORE)	
114	1-654-751-11	FLEXIBLE BOARD	
△151	8-848-387-01	OPTICAL PICK UP BLOCK KSS-213BA/S-N	
152	1-769-069-11	WIRE (FLAT TYPE) (16 CORE)	
FL601	1-519-721-31	INDICATOR TUBE, FLUORESCENT	
M101	X-4917-523-4	BASE (OUTSERT) ASSY (SPINDLE)	
M102	X-4917-504-1	MOTOR ASSY (SLED)	
M701	A-4353-976-A	MOTOR ASSY, ROTARY (TABLE)	
M702	A-4353-974-A	MOTOR ASSY, LOADING	
S101	1-572-085-11	SWITCH, LEAF (LIMIT)	
S701	1-572-713-11	SWITCH, PUSH (WITH CONNECTOR) (DOWN DET)	
*****			
		ACCESSORIES & PACKING MATERIALS *****	
	4-937-945-01	PLATE (TRANSPORT), LOCK	
*	4-973-916-01	CUSHION (FRONT)	
*	4-973-917-01	CUSHION (REAR)	
*****			
		***** HARDWARE LIST *****	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#2	7-682-554-04	SCREW +B 3X25	
#3	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
#4	7-682-961-01	SCREW +PSW 4X8	
#5	7-685-136-19	SCREW +P 2.6X12 TYPE2 NON-SLIT	
#6	7-621-255-15	SCREW +P 2X3	

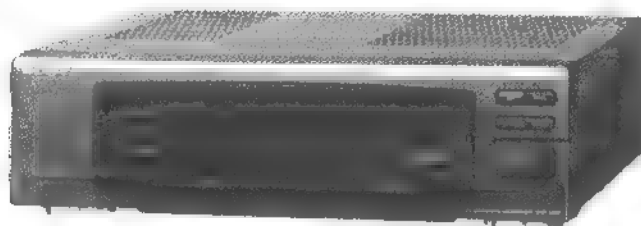
The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.



# SDP-N600

## SERVICE MANUAL

*AEP Model  
UK Model  
E Model  
Australian Model*



SDP-N600 is the Surround processor section in LBT-N650AV.

### SPECIFICATIONS

DIN power output	
CENTER	20 W (8 ohms, at 1 kHz)
REAR	20 W + 20 W (8 ohms, at 1 kHz)
Continuous RMS power output	
CENTER	23 W (8 ohms, at 1 kHz, 5% THD)
REAR	23 W + 23 W (8 ohms, at 1 kHz, 5% THD)
Music power output	
CENTER	28 W (8 ohms, at 1 kHz, 10% THD)
REAR	28 W + 28 W (8 ohms, at 1 kHz, 10% THD)

Audio input	Jack type	Sensitivity	Impedance
VIDEO 1	Phono	435 (245) mV	47 kilohms
VIDEO 2	Phono	435 (245) mV	47 kilohms

( ) : E, Australian model

Audio output	Jack type	Voltage	Impedance
VIDEO 1	Phono	235 (245) mV	2 kilohms
VIDEO 2	Phono	235 (245) mV	2 kilohms
CENTER OUT	Phono		1 kilohms

( ) : E, Australian model

Video input (phono jacks)	
VIDEO 1, VIDEO 2	1 Vp-p, 75 ohm unbalanced, sync negative
Video output (phono jacks)	
VIDEO 1	1 Vp-p, 75 ohm unbalanced, sync negative
VIDEO 2	1 Vp-p, 75 ohm unbalanced, sync negative
MONITOR	1 Vp-p, 75 ohm unbalanced, sync negative

#### Power requirements

AEP, UK, East European, CIS model :  
220-230 V AC, 50/60 Hz

Australian model:  
220-240 V AC, 50/60 Hz

Other model:  
110-120 V or 220 V-240 V AC  
adjustable, 50/60 Hz

Power consumption 63 W

Mass Approx. 4.6 kg

Dimensions  
Approx. 355 x 105 x 320 mm  
(w/h/d, including projections)

— Continued on next page —



**SURROUND PROCESSOR**  
**SONY®**

## SERVICE NOTE

### How to confirm the operation with a single unit

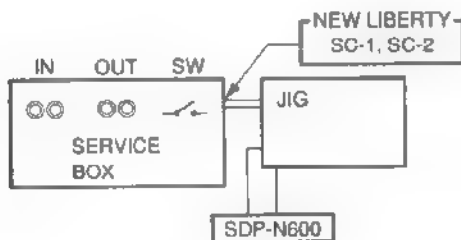
- Normally, this set does not operate with a single unit.  
The exclusive jig (J-2501-081-A) is necessary to operate the set with a single unit.  
The cable attached to set is used for connecting with the jig.

### How to turn the power on

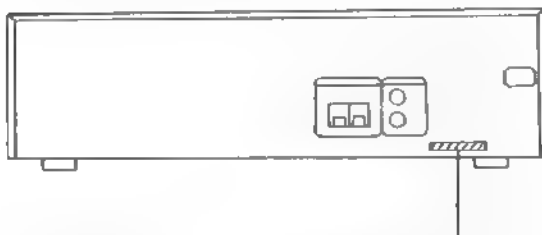
- If the power switch of the service box is set to ON, the power supply of the set is turned on. The sound signal is input/output through CN102 (SYSTEM CONTROL 4). In case of using the input/output terminal of SERVICE BOX, press **VIDEO 1/2** key and **SURROUND OFF** key for more than three seconds ■ once.
- When using the input/output terminals of VIDEO 1 and VIDEO 2 on the unit, press **VIDEO 1/2** key to switch.

### All light up of FL tube

When **REAR LEVEL +** key and **HALL** key are pressed for more than three seconds then press a key, all FL tubes are lit. After that the display will be changed as KEY 0 to KEY 11 at every pressing keys (eleven times). (The display will not be changed by pressing the same key.) Press a key again to release.



### MODEL IDENTIFICATION — BACK PANEL —



	Parts No.
AEP Model	4-971-125-0□
UK Model	4-971-125-1□
EE, CIS Model	4-971-125-2□
E Model	4-971-125-3□
AUS Model	4-971-125-4□

- Abbreviation  
EE : East European model.  
AUS : Australian model.

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2-7.	Schematic Diagram — IN/OUT Section —	19
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	• IC601 TMP87C814N Display Control	28
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### Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

### Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 °C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

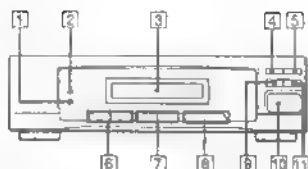
### SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY MARK **Δ** OR DOTTED LINE WITH MARK **Δ** ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN **■** THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

## SECTION 1 GENERAL

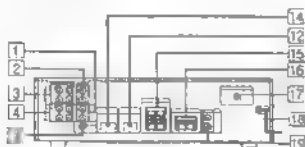
This section is extracted  
from instruction manual.

### Front Panel



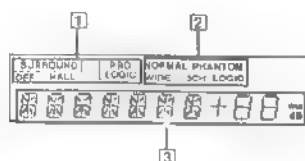
- 1 REAR SPEAKER indication (22)
- 2 CENTER SPEAKER indication (22)
- 3 Display window
- 4 SURROUND OFF button (22)
- 5 HALL button (22)
- 6 REAR LEVEL (+/-) buttons (22)
- 7 CENTER LEVEL (+/-) buttons (22)
- 8 DELAY TIME (+/-) buttons (22)
- 9 DOLBY PRO-LOGIC button (22)
- 10 VIDEO 1/2 button (21, 25)
- 11 DOLBY MODE button (22)

### Rear Panel



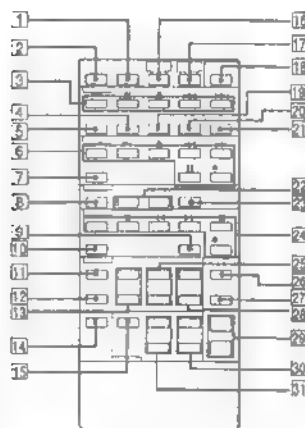
- 1 VIDEO 2 VIDEO IN/OUT jacks (21)
- 2 VIDEO 1 VIDEO IN/OUT jacks (21)
- 3 VIDEO 1 AUDIO IN/OUT jacks (21)
- 4 VIDEO 2 AUDIO IN/OUT jacks (21)
- 5 MONITOR VIDEO OUT (21)
- 6 SYSTEM CONTROL 4 terminals (5)
- 7 SYSTEM CONTROL 3 terminals (5)
- 8 REAR SPEAKER connectors (4)
- 9 CENTER SPEAKER connectors (4)
- 10 VOLTAGE SELECTOR (except for E model) (5)
- 11 AC power cord (6)
- 12 CENTER OUT jacks (21)

### Display Window



- 1 Surround mode (SURROUND/OFF/HALL/PRO LOGIC) indications (22)
- 2 Dolby Pro-Logic mode (NORMAL/PHANTOM/WIDE/3CH LOGIC) indications (22)
- 3 Function indications (21)

### Remote (RM-S600L)



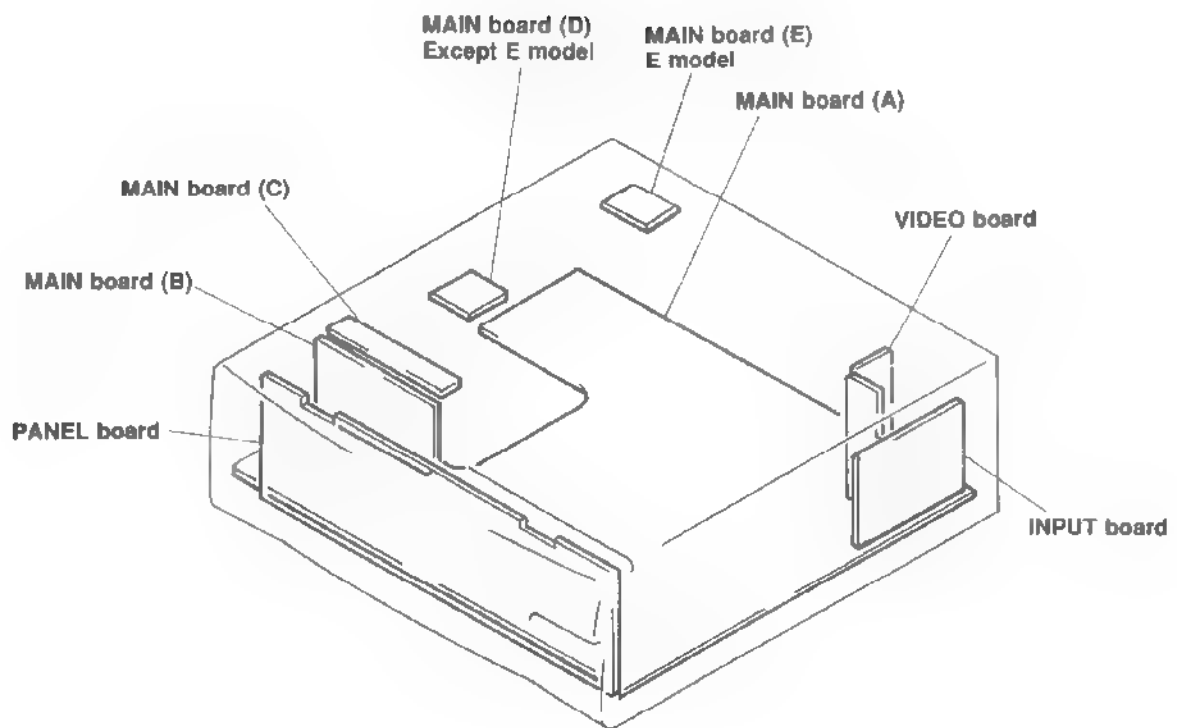
- 1 SLEEP button (23)
- 2 FUNCTION button (14, 17, 21, 25)
- 3 CD operating buttons (7, 8)
  - ▶ (play)
  - ◀◀/▶▶ (AMS\*)
  - ⏸ (pause)
  - (stop)
- \*AMS: Automatic Music Sensor
- 4 CLEAR button (8)
- 5 CHECK button (8, 15)
- 6 TAPE operating buttons (12)
  - ◀▶ (reverse side play/front side play)
  - ◀◀/▶▶ (fast leftward/fast rightward)
  - (stop)
  - ⏸ (pause)
  - REC
- 7 DECK SELECT A/B selector (12)
- 8 TUNER BAND button (10, 24)
- 9 ANT TV/VTR button\*
- 10 VTR 2/3 selector (21)
- 11 TEST TONE button (22)
- 12 SURROUND MODE button (22)
- 13 REAR LEVEL buttons (22)
- 14 VIDEO 1/2 button (21, 25)
- 15 TV/VIDEO button\*
- 16 VTR POWER button\*\*
- 17 TV POWER button\*
- 18 SYSTEM POWER button (7, 10, 12)
- 19 EDIT button (14, 15)
- 20 REPEAT button (9)
- 21 DISC SKIP button (7)
- 22 PRESET (+/-) buttons (11)
- 23 STEREO/MONO button (10)
- 24 VTR operating buttons\*\*
  - ▶ (play)
  - ◀◀/▶▶ (fast leftward/fast rightward)
  - (stop)
  - ⏸ (pause)
  - REC
- 25 CENTER LEVEL buttons (22)
- 26 SELECT 1-5 button (18, 19)
- 27 P-FILE 1-5 button (18, 19)
- 28 DELAY TIME buttons (22)
- 29 MASTER VOL (Volume) buttons (7, 18, 22)
- 30 CHANNEL buttons\*
- 31 VOLUME buttons\*

\* For use with Sony TVs

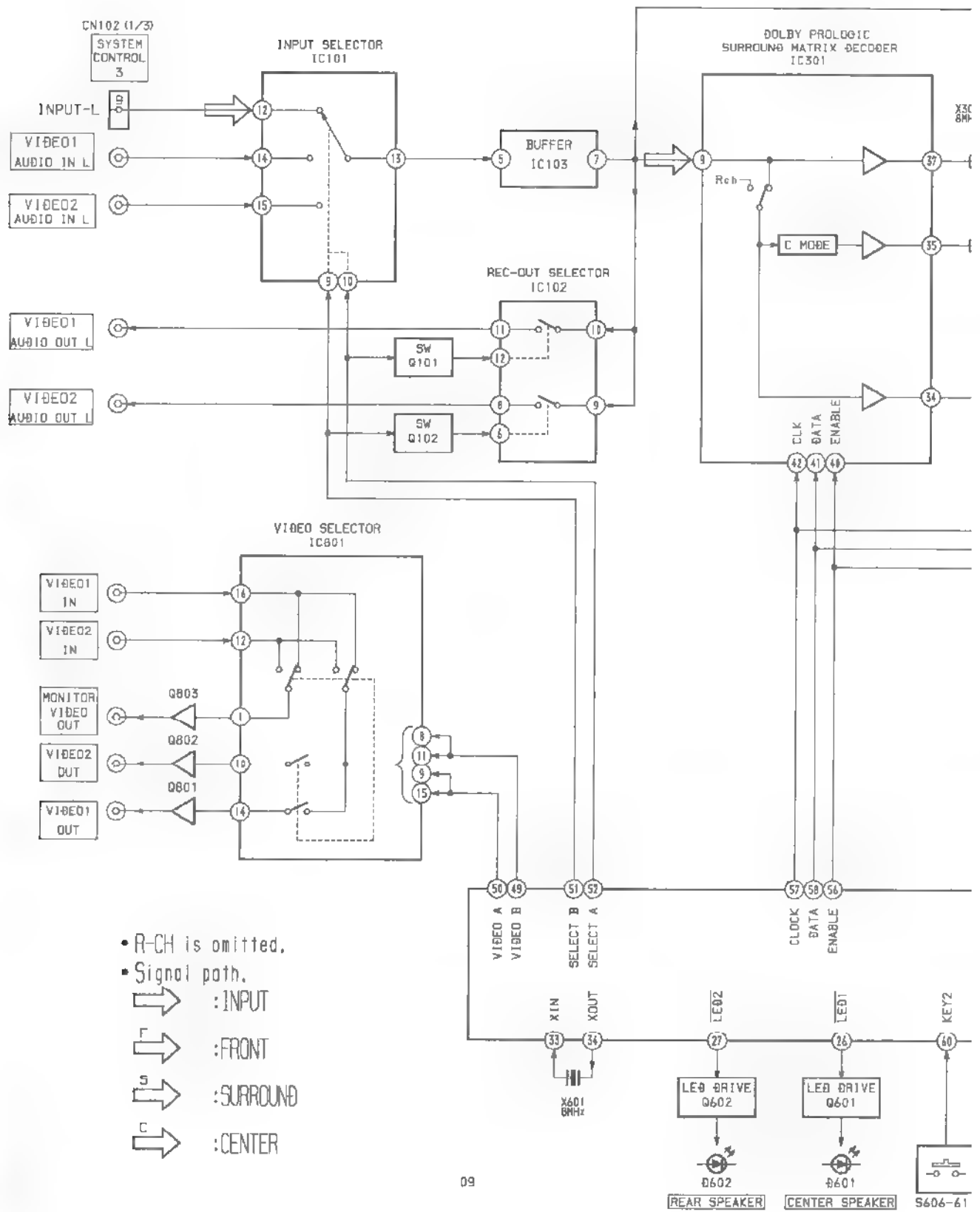
\*\* For use with Sony VCRs

## SECTION 2 DIAGRAMS

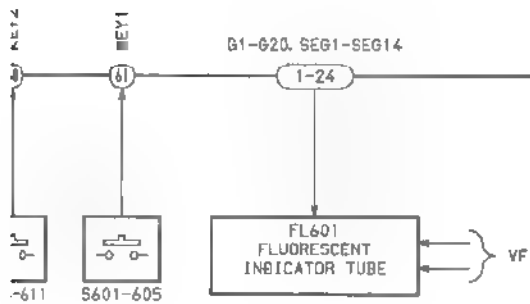
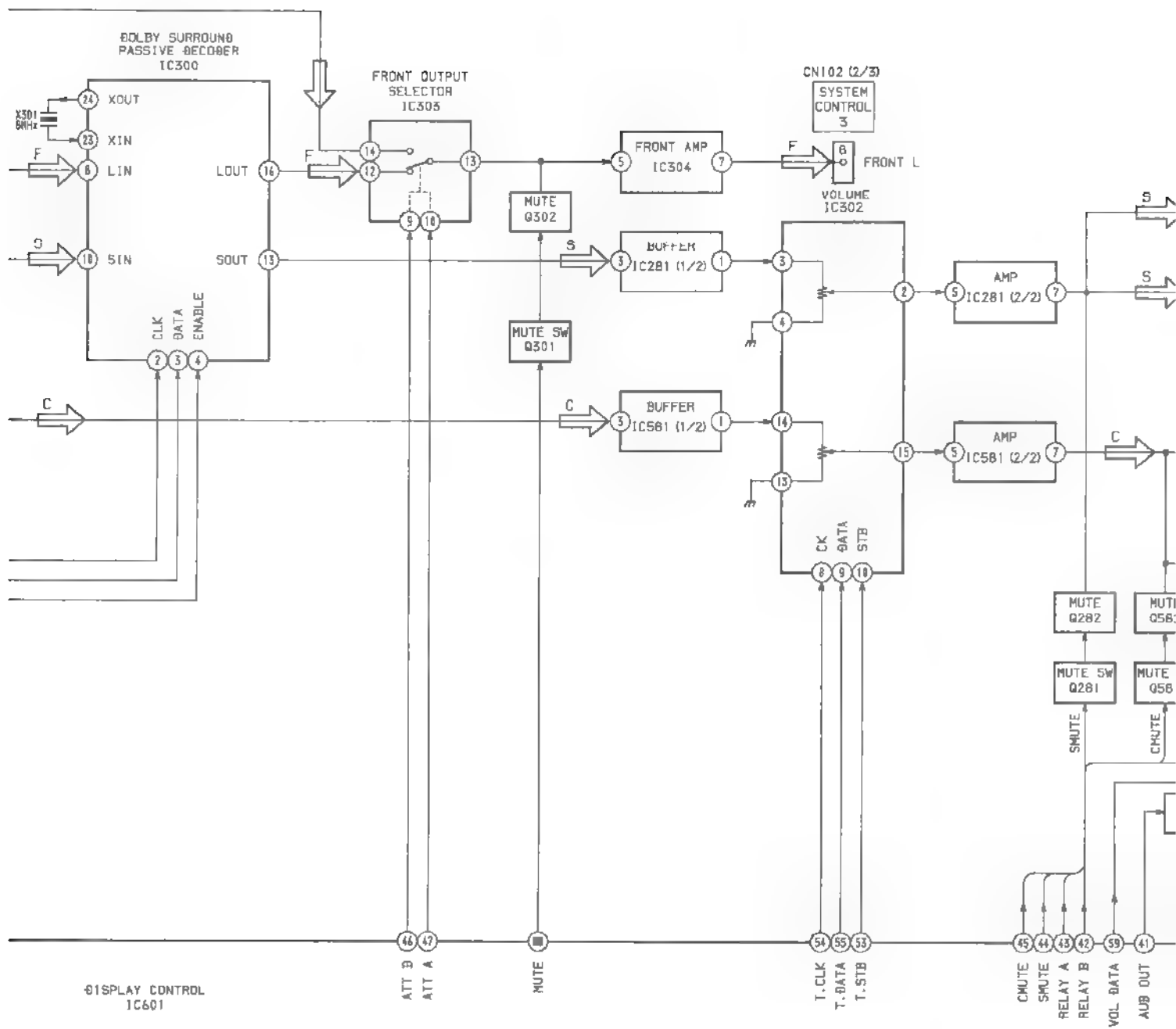
### 2-1. CIRCUIT BOARDS LOCATION

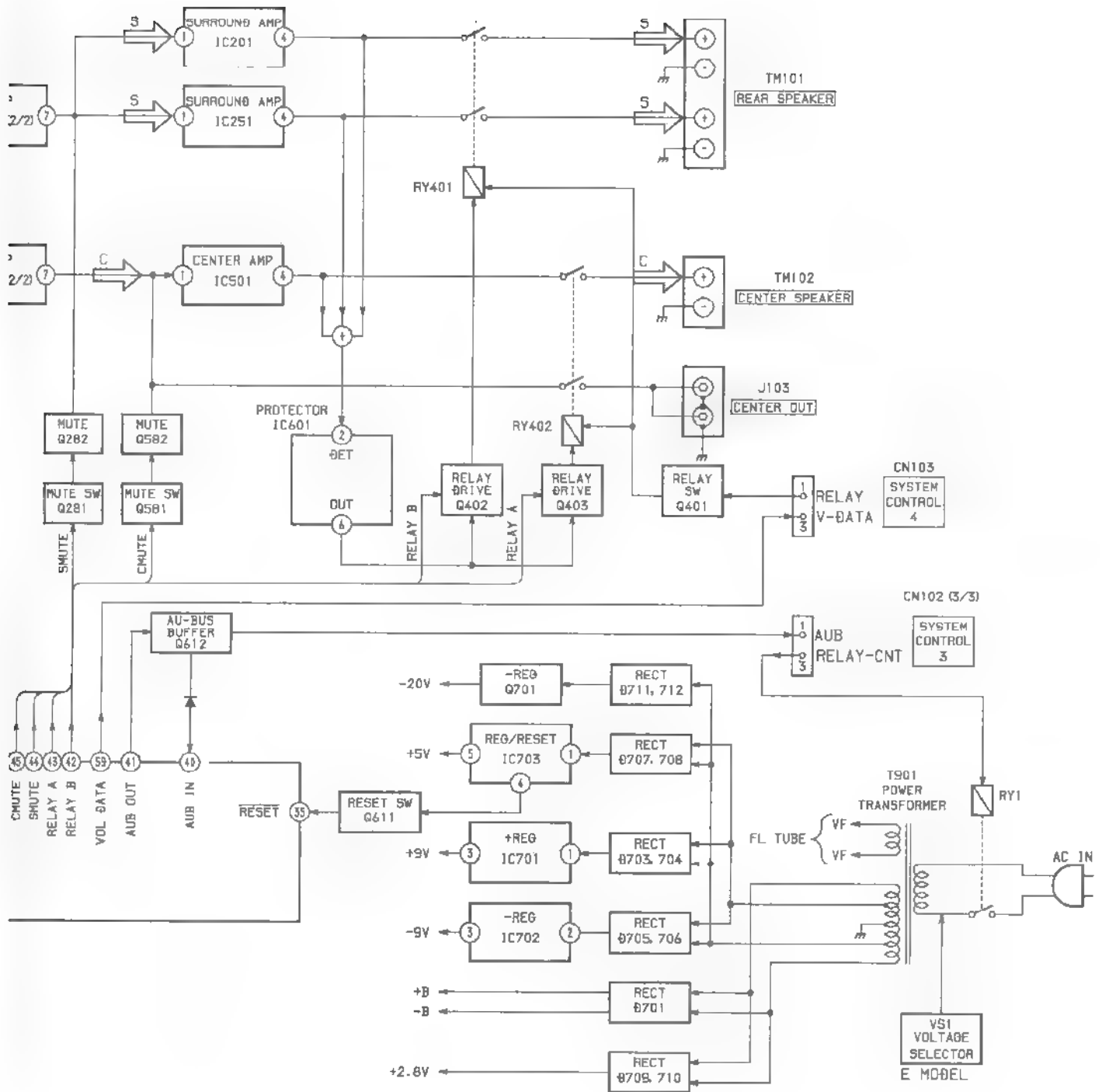


## 2-2. BLOCK DIAGRAM







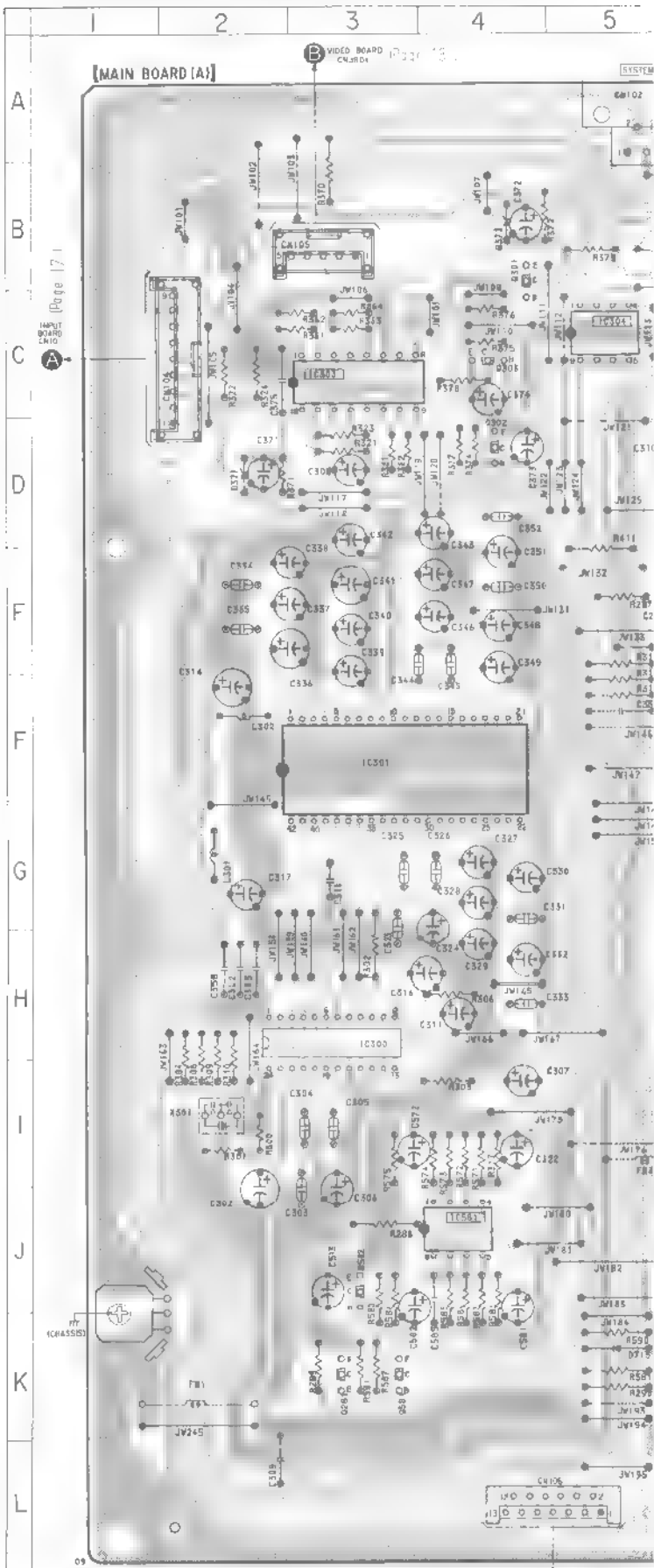


2-3. PRINTED WIRING BOARD — MAIN SECTION —  
 - See page 4 for Circuit Boards Location.

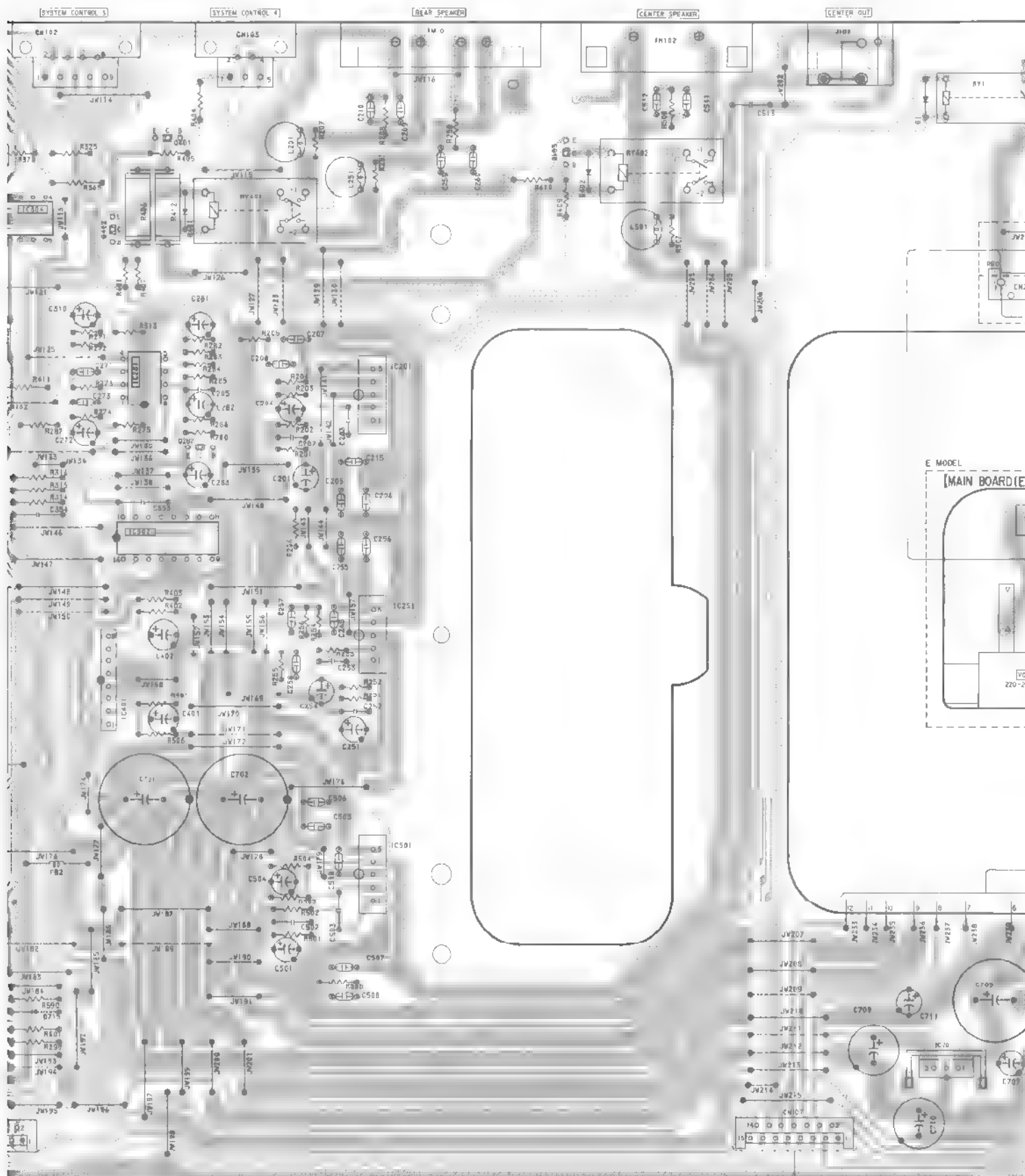
• Semiconductor Location

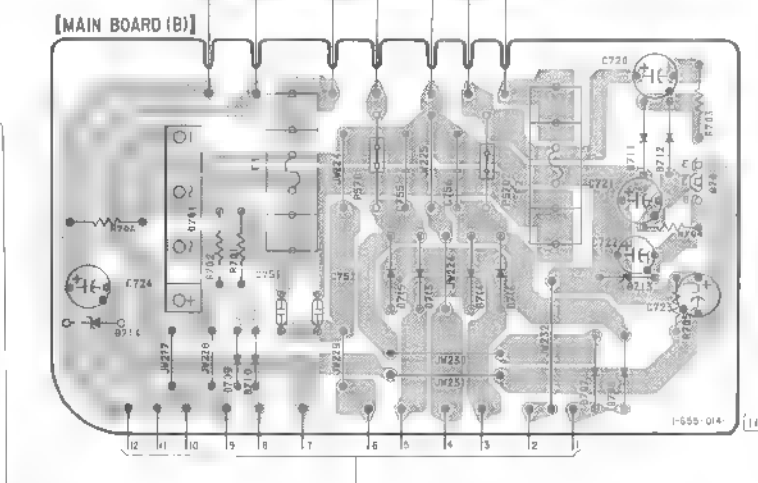
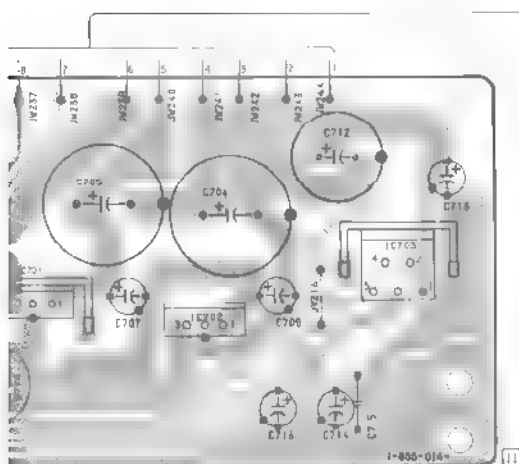
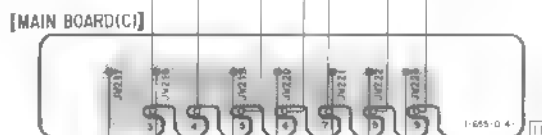
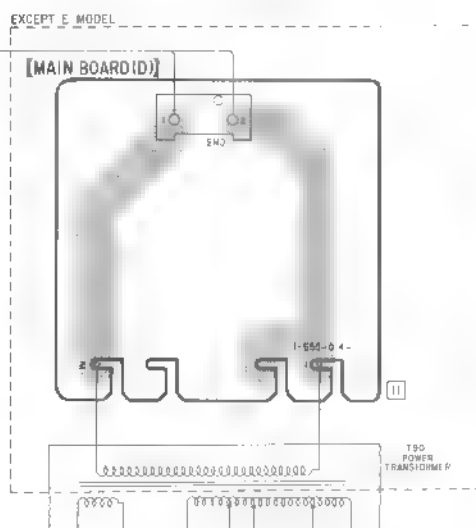
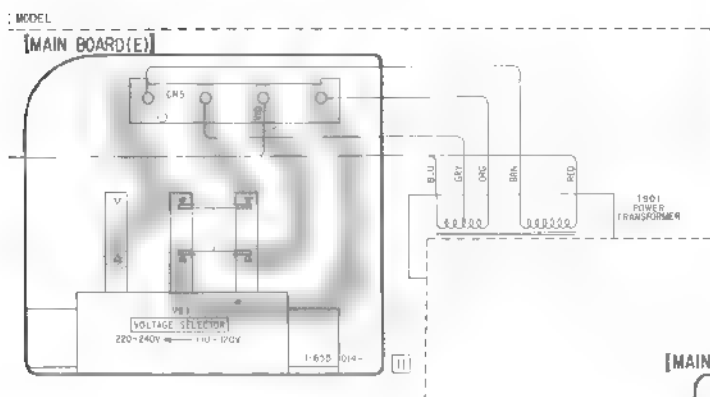
Ref. No.	Location
D1	B-14
D371	D-2
D372	B-4
D401	C-6
D402	B-10
D701	J-19
D703	J-20
D704	J-21
D705	J-20
D706	J-21
D707	K-22
D708	K-22
D709	K-19
D710	K-19
D711	I-22
D712	I-22
D713	J-22
D714	K-18
D715	K-5
IC201	E-8
IC251	G-8
IC281	E-6
IC300	H-3
IC301	F-3
IC302	F-6
IC303	C-3
IC304	C-5
IC401	H-6
IC501	J-8
IC581	J-4
IC701	K-14
IC702	K-15
IC703	K-16
Q281	K-3
Q282	E-7
Q301	C-4
Q302	D-4
Q303	C-4
Q401	B-6
Q402	C-6
Q403	B-10
Q581	K-3
Q582	J-3
Q701	J-22

Note:  
 • ○ : parts extracted from the component side.  
 • Δ : internal component.  
 • [Pattern] : Pattern from the side which enable seeing.



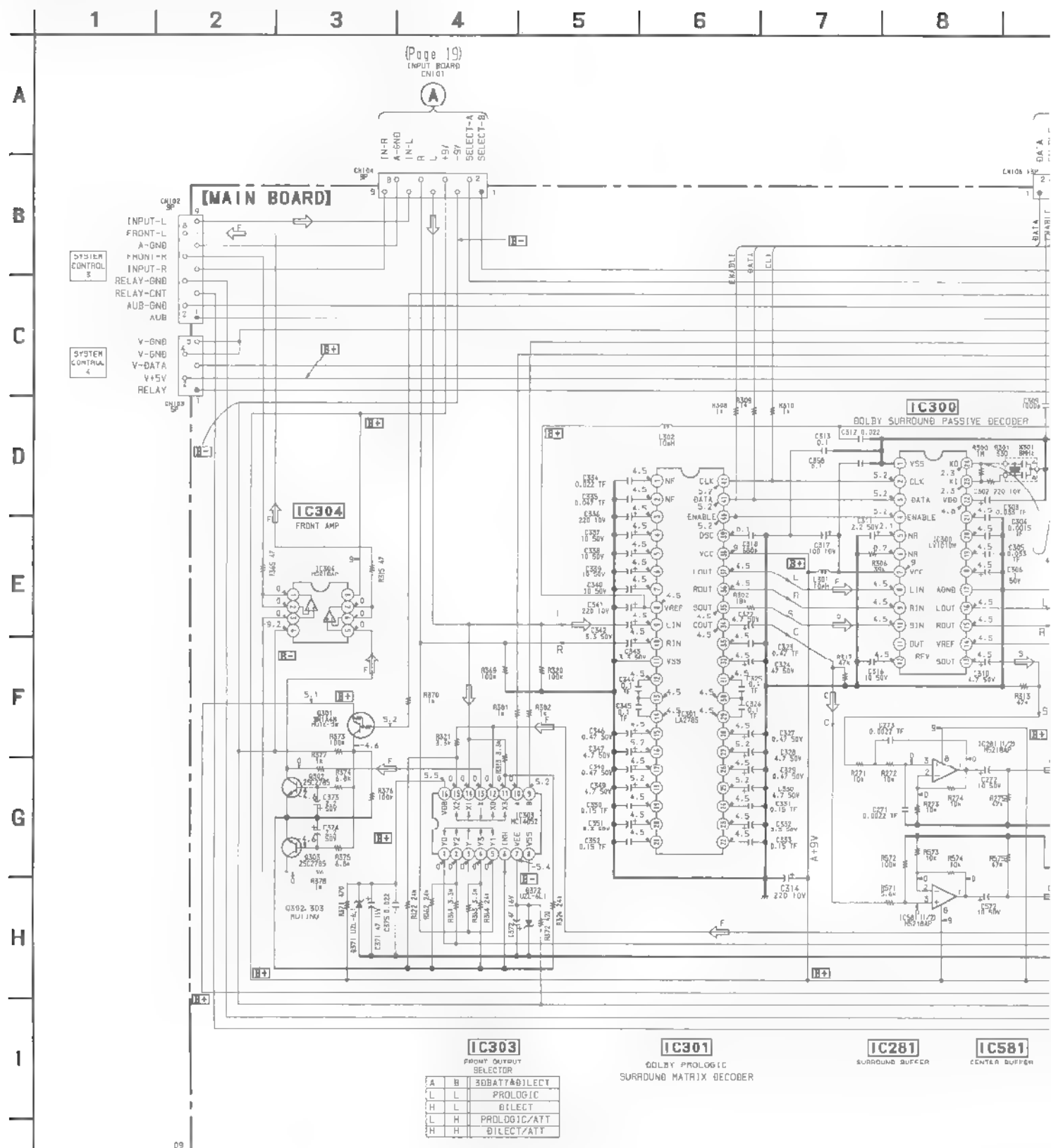
5 6 7 8 9 10 11 12 13 14





## 2-4. SCHEMATIC DIAGRAM — MAIN SECTION —

• See page 15 for ■ Block Diagrams.



①



©







25

26



27

28

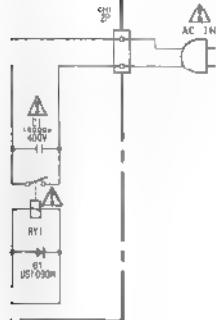
# NOTE

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\mu\text{F}:\mu\text{F}$  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and 1/4W or less unless otherwise specified.
- % : indicates tolerance.
- $\Delta$  : internal component.
-  : nonflammable resistor.
-  : panel designation.

Note: The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

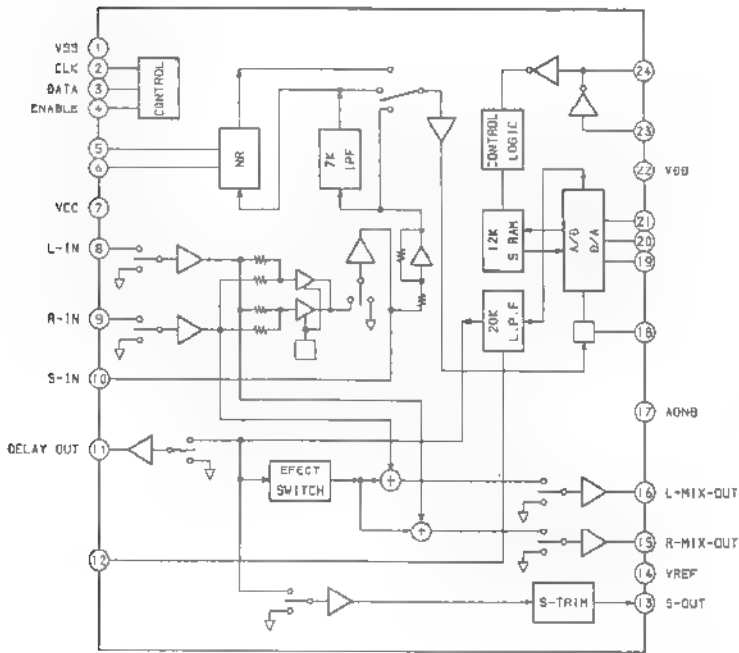
-  : B+ Line.
-  : B- Line.
- Voltages and waveforms are dc with respect to ground in service mode. (See page 2)
- Voltages are taken with a VOM (input impedance 10M $\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Signal path.

-  : INPUT
-  : FRONT
-  : SURROUND
-  : CENTER

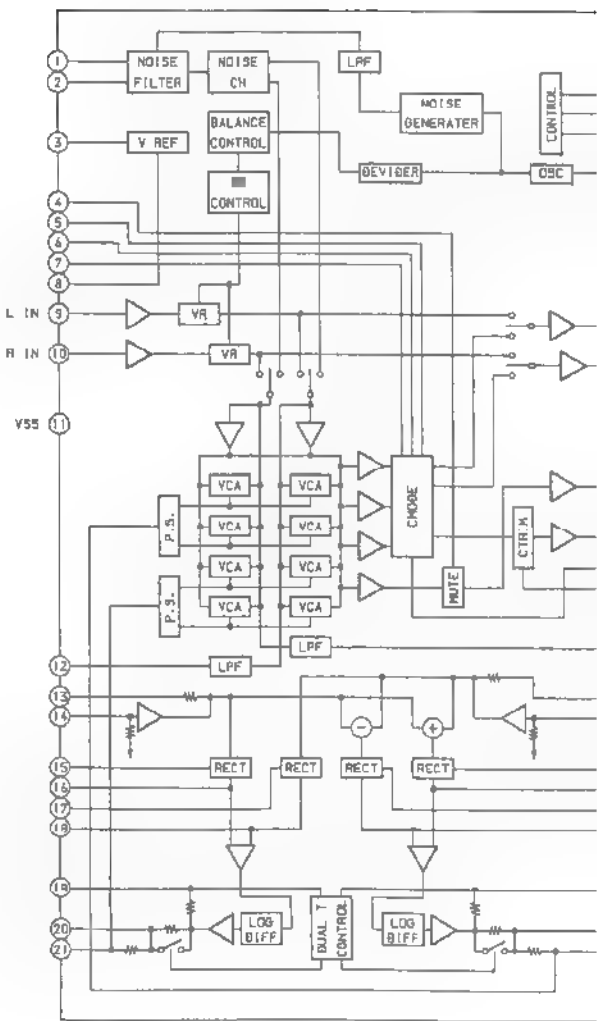


2-5. BLOCK DIAGRAMS — MAIN SECTION —

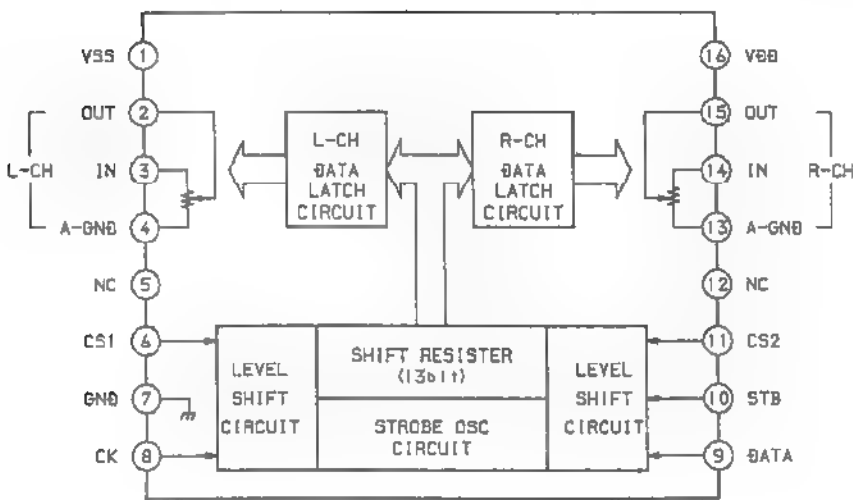
IC300 LV1010N

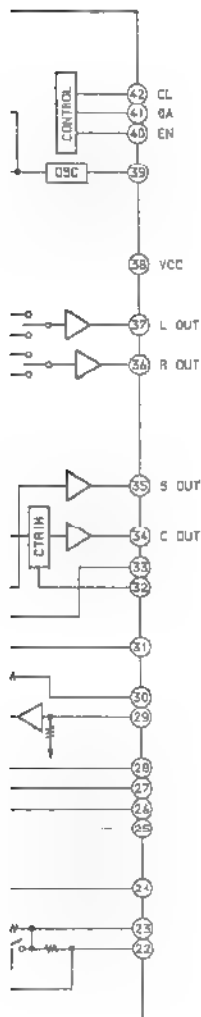


IC301 LA2785

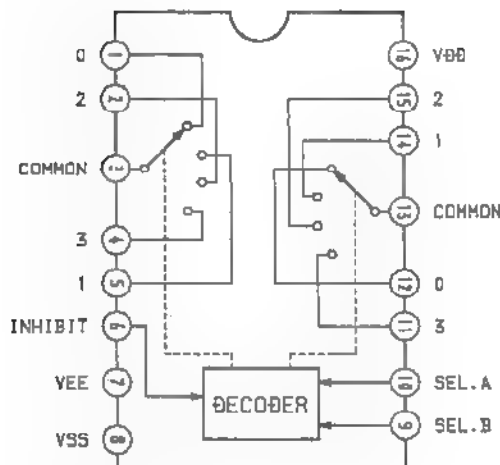


IC302 TC9210P

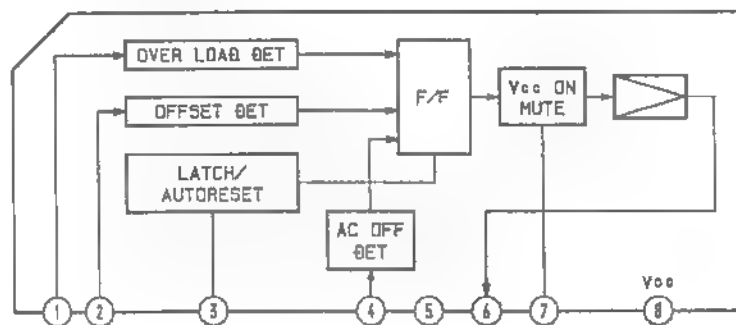




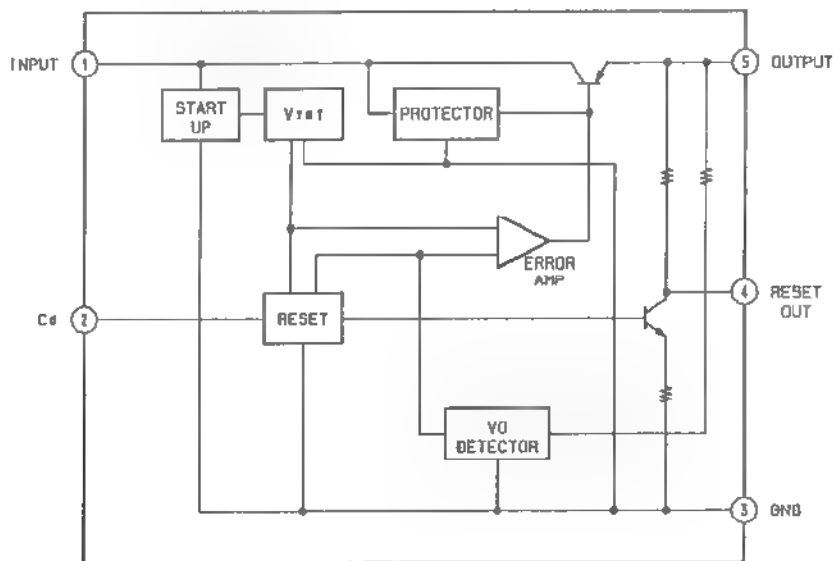
IC303 MC14052



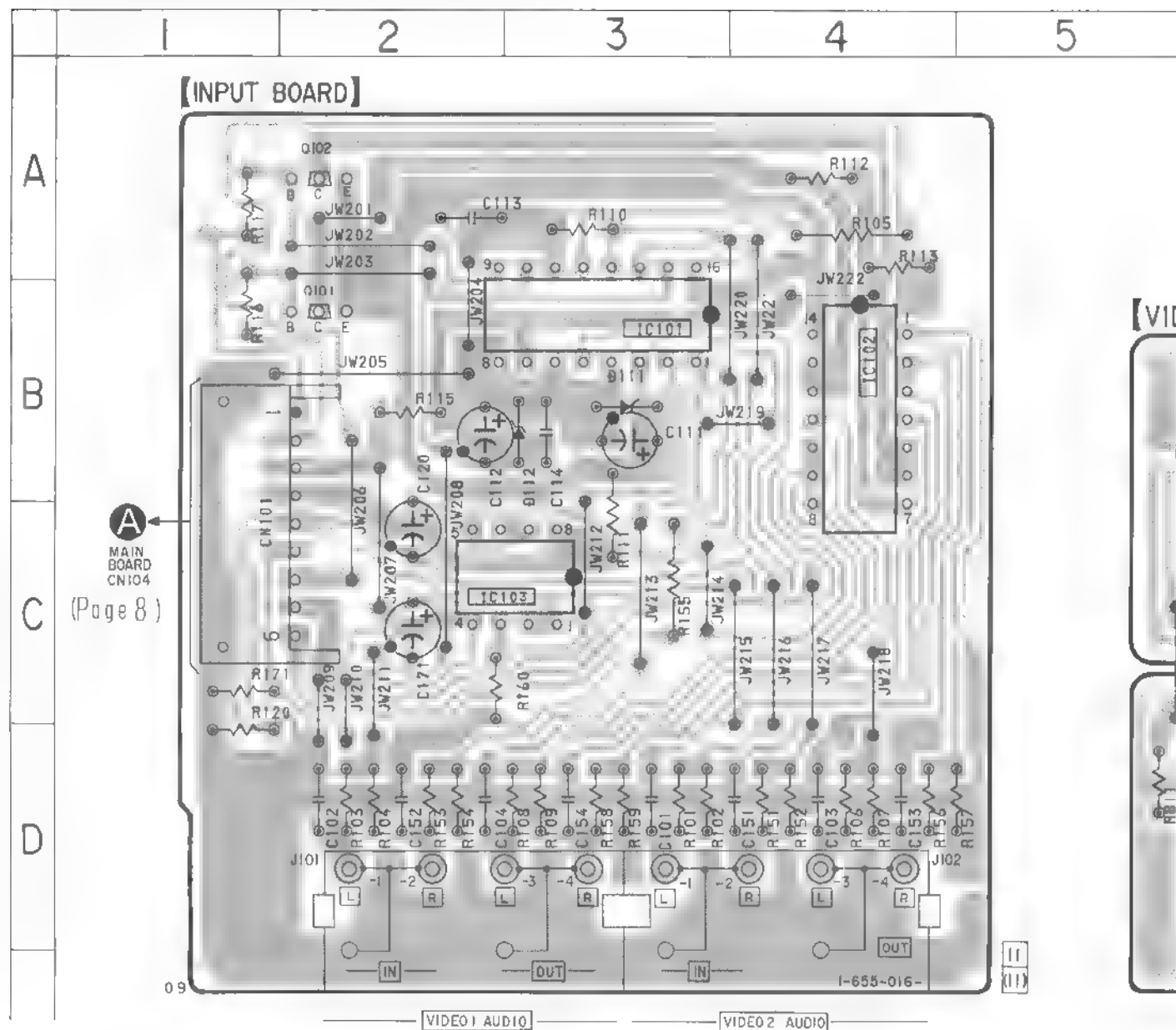
IC401  $\mu$ PC1237HA



IC703 L78MR06



**2-6. PRINTED WIRING BOARD — IN/OUT SECTION —**  
 • See page 4 for Circuit Boards Location.



**• Semiconductor Location**

Ref. No.	Location
D111	B-3
D112	B-3
IC101	B-3
IC102	B-4
IC103	C-2
IC801	B-6
Q101	B-2
Q102	A-2
Q801	D-6
Q802	D-7
Q803	D-9

**Note:**

- — : parts extracted from the component side.
- — : Pattern from the side which enable seeing.

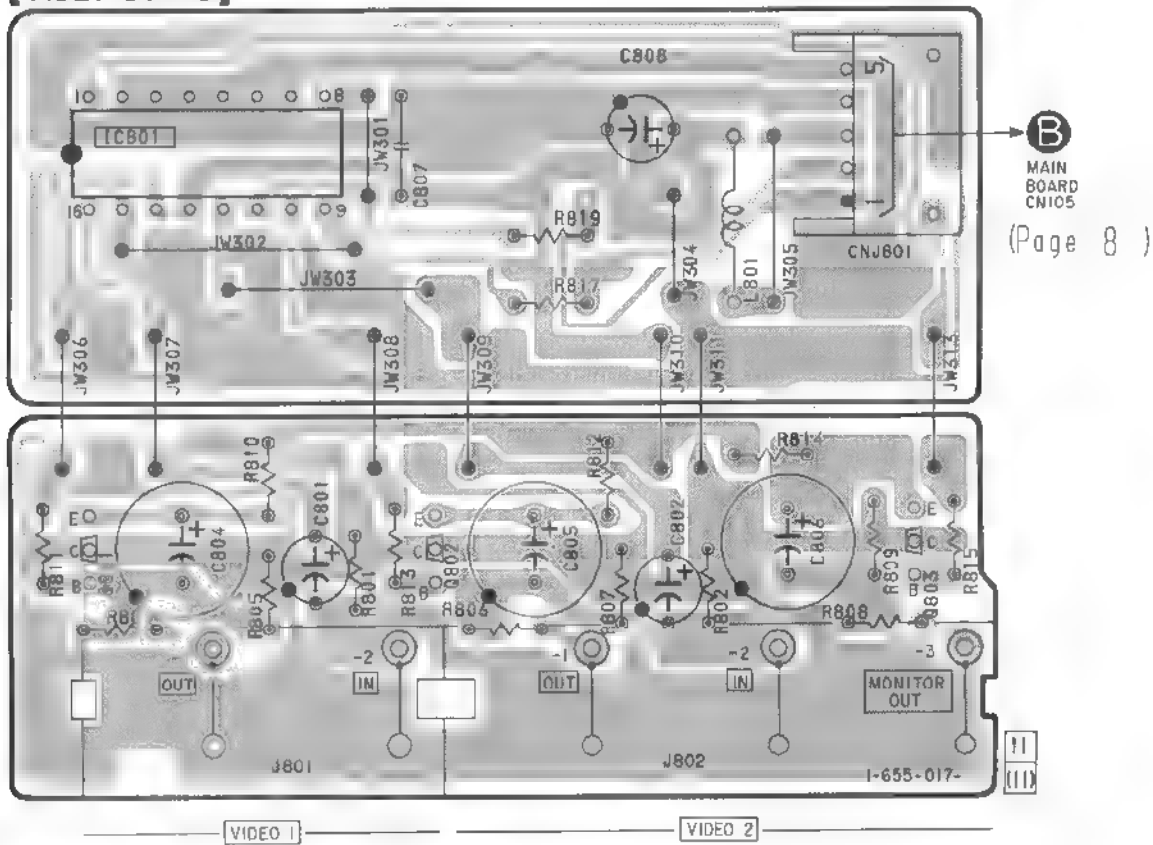
6

7

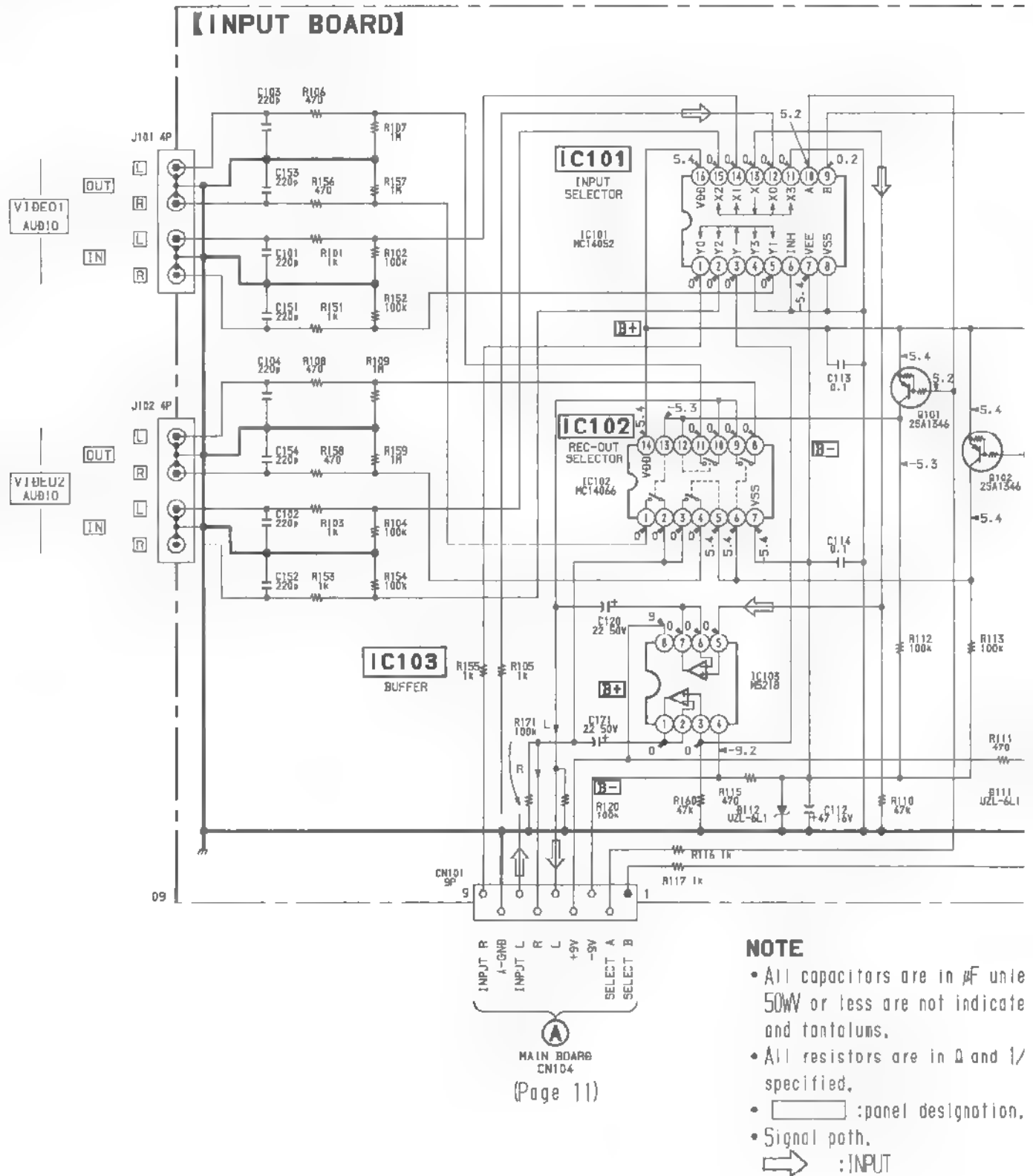
8

9

# 【VIDEO BOARD】



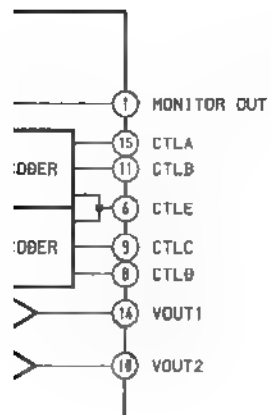
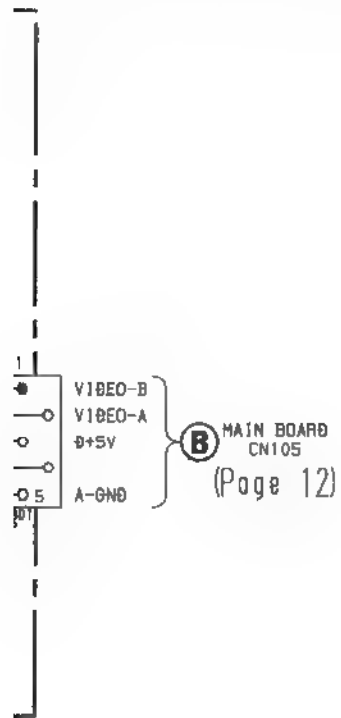
## 2-7. SCHEMATIC DIAGRAM — IN/OUT SECTION —



### NOTE

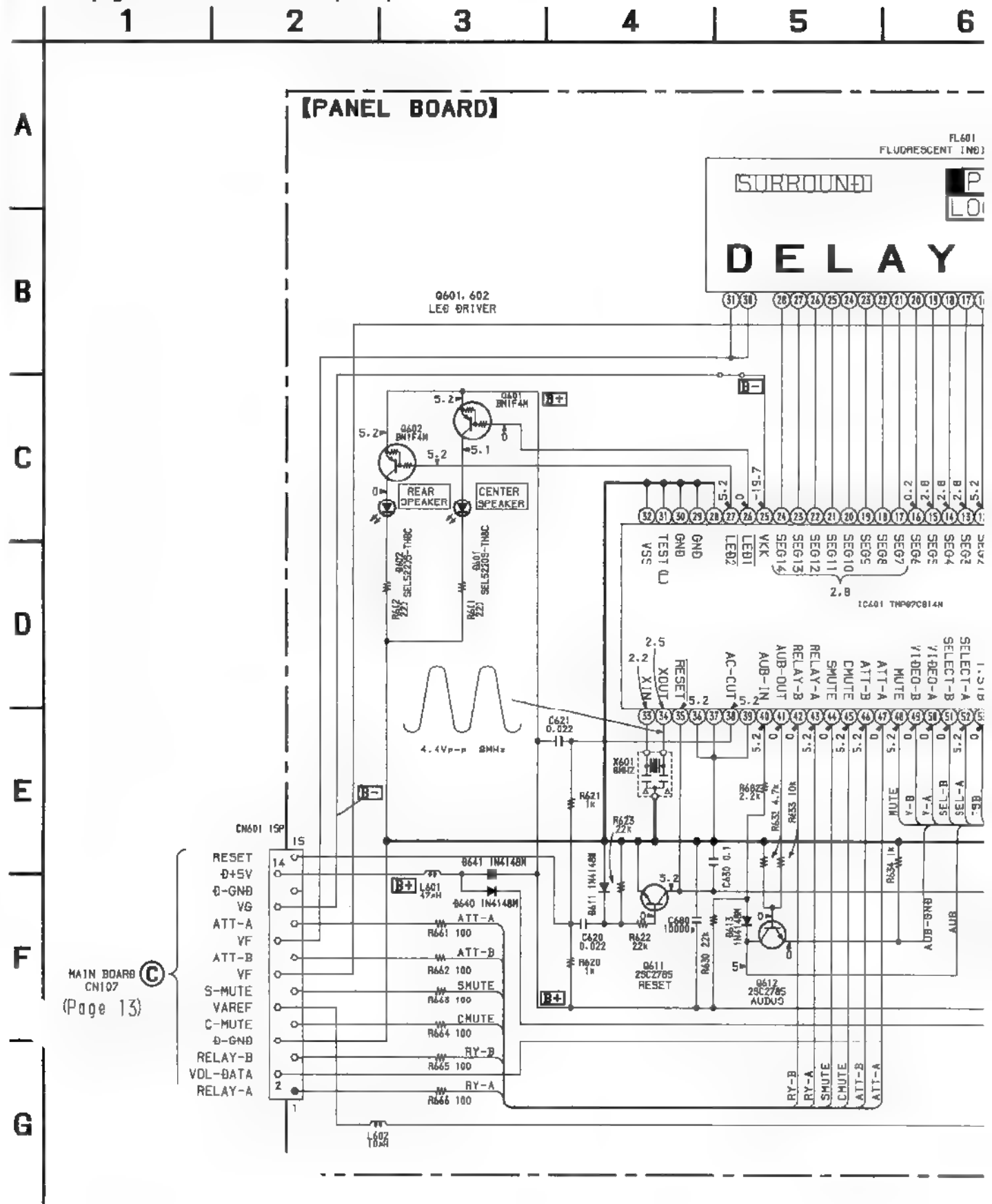
- All capacitors are in  $\mu\text{F}$  unless 50W or less are not indicated and tantalums.
- All resistors are in  $\Omega$  and  $1/\text{specified}$ .
- : panel designation.
- Signal path.
- $\Rightarrow$  : INPUT







2-9. SCHEMATIC DIAGRAM — PANEL SECTION —  
 • See page 28 for IC Pin Function. (IC601)



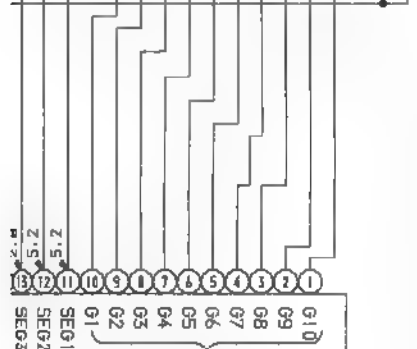
L601  
INDICATOR TUBE

PRO  
OGIC

PHANTOM

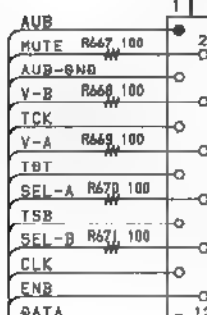
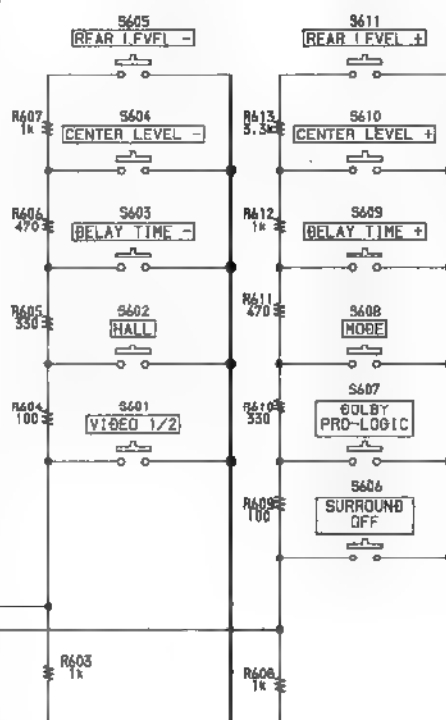
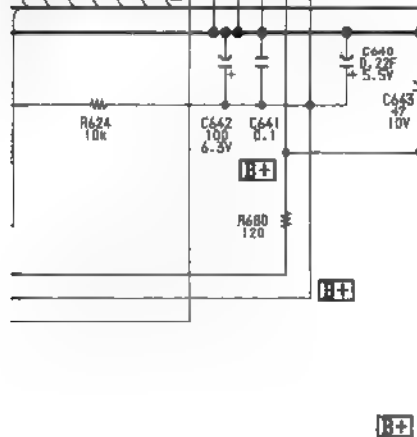
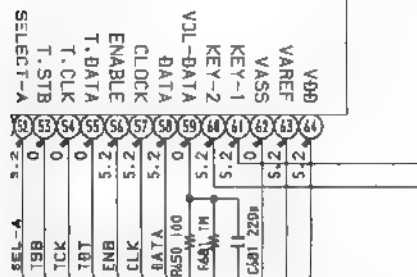
25 ns

17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

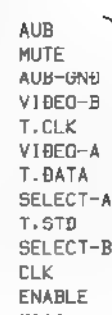


IC601

DISPLAY CONTROL



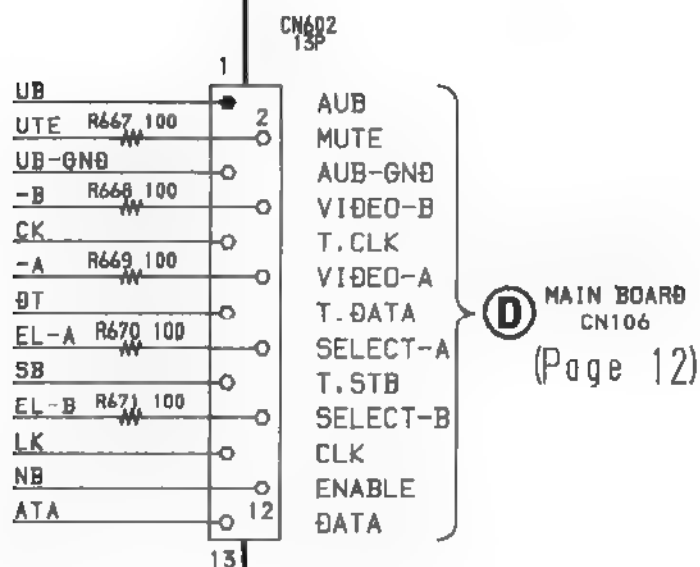
CM602  
13P



MAIN BOARD  
CN106  
(Page 12)

# NOTE

- All capacitors are in  $\mu\text{F}$  unless 50W or less are not indicated and tantalums.
- All resistors are in  $\Omega$  and  $1/4\text{W}$  specified.
- $\Delta$  : internal component.
- $\square$  : panel designation.
- $\text{B+}$  : B+ Line.
- $\text{B-}$  : B- Line.
- Voltages and waveforms are dc w in service mode. (See page
- Voltages are taken with a VOM (I Voltage variations may be noted tion tolerances.
- Waveforms are taken with a osci Voltage variations may be noted tion tolerances.



## NOTE

- All capacitors are in  $\mu F$  unless otherwise noted. pF:  $\mu\mu F$   
50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and 1/4W or less unless otherwise specified.
- $\Delta$  : internal component.
- : panel designation.
- B+ : B+ Line.
- B- : B- Line.
- Voltages and waveforms are dc with respect to ground in service mode. (See page 2)
- Voltages are taken with a VOM (Input impedance 10M $\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.

## 2-10. IC PIN FUNCTION

### • IC601 TMP87C814N Display Control

Pin No.	Pin Name	I/O	Function
1 to 10	G1 to G10	O	FL display grid output
11 to 24	SEG1 to SEG14	O	FL display segment output
25	VKK	—	-27V (FL display)
26, 27	LED1, LED2	O	LED driver output
28	—	—	Connect to GND
29, 30	GND	—	GND
31	TEST (L)	—	Connect to GND
32	VSS	—	GND
33	XIN	I	} Clock oscillator (8MHz)
34	XOUT	O	
35	RESET	I	System reset input
36, 37	—	—	Connect to GND
38	AC-CUT	I	Power on detect
39	—	—	Connect to GND
40	AUB-IN	I	AU-BUS input
41	AUB-OUT	O	AU-BUS output
42	RELAY-A	O	Center speaker relay drive
43	RELAY-B	O	Rear speaker relay drive
44	SMUTE	O	Rear speaker mute
45	CMUTE	O	Center speaker mute
46	ATT-B	O	} Input function ATT control
47	ATT-A	O	
48	MUTE	O	Front speaker mute
49	VIDEO-B	O	} Video output select
50	VIDEO-A	O	
51	SELECT-B	O	} Audio signal select
52	SELECT-A	O	
53	T. STB	O	IC302 TC9210P strobe output
54	T. DATA	O	IC302 TC9210P data output
55	T. CLK	O	IC302 TC9210P clock output
56	ENABLE	O	IC300 LV1010N & IC301 LA2785 enable output
57	CLOCK	O	IC300 LV1010N & IC301 LA2785 clock output
58	DATA	O	IC300 LV1010N & IC301 LA2785 data output
59	VOL-DATA	O	Volume position data output
60	KEY-2	I	} Key input
61	KEY-1	I	
62	VASS	—	GND
63	VAREF	—	AD reference voltage
64	VDD	—	+5V

## SECTION 3 EXPLODED VIEWS

### NOTE:

- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.

- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.

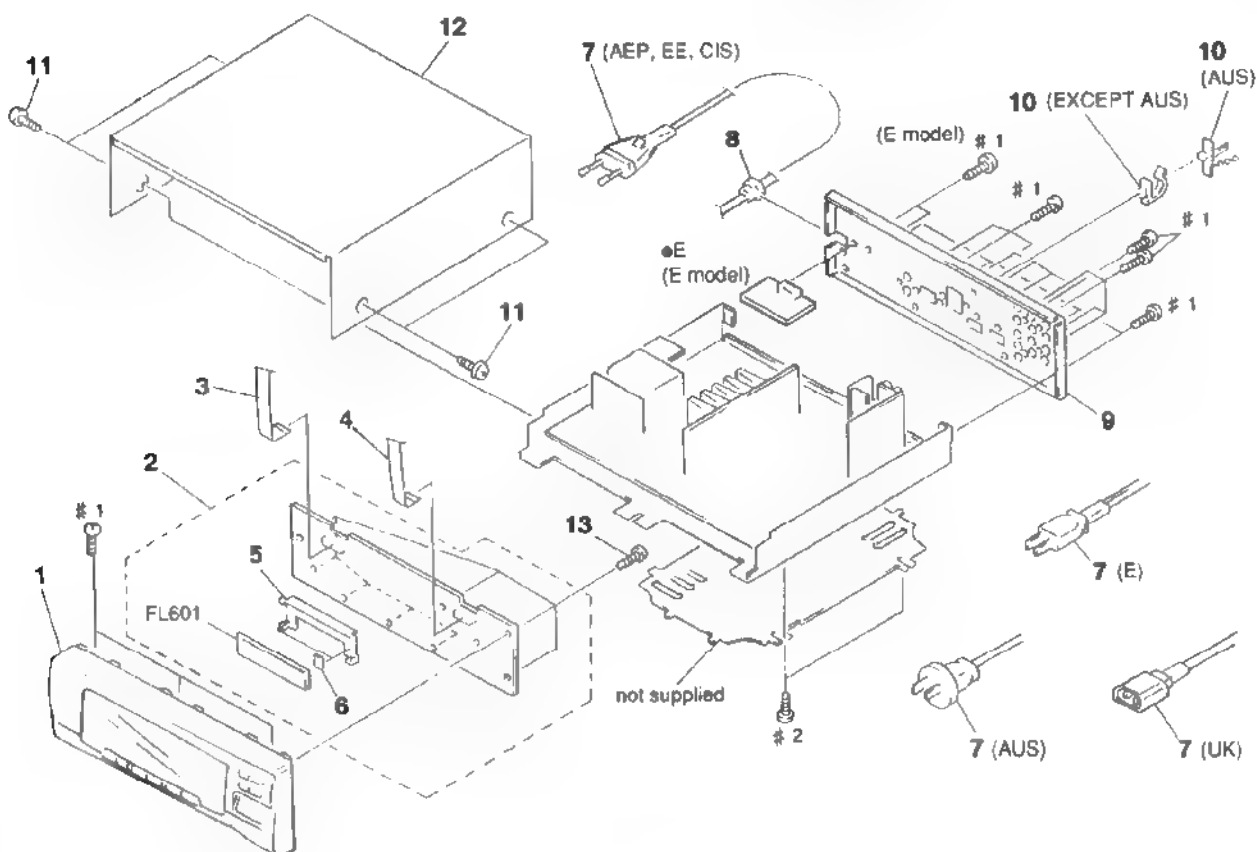
### • Abbreviation

EE : East European model  
AUS : Australian model

The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

### 3-1. CASE SECTION

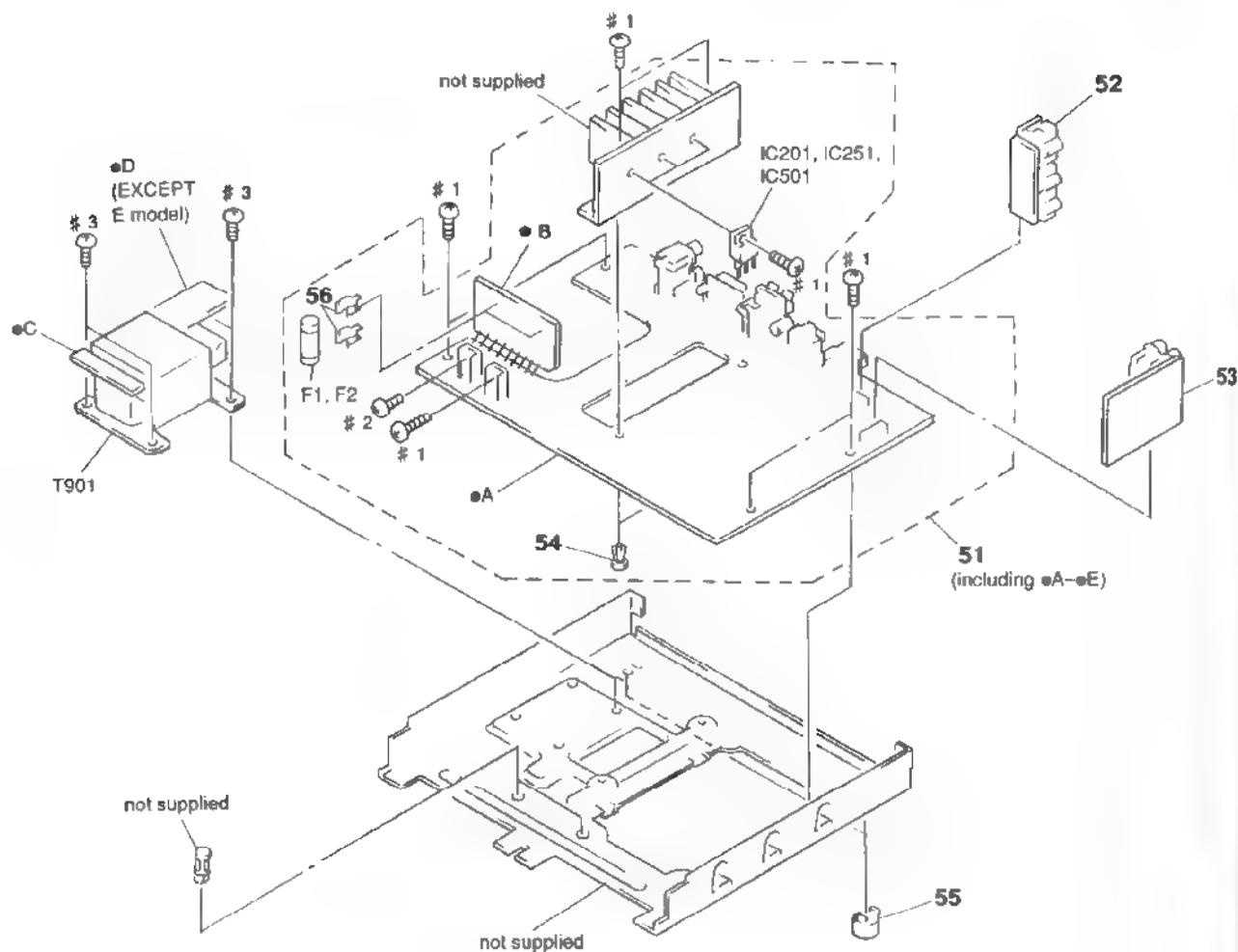
NOTE: ● A, ● B, ● C, and ● D are supplied as MAIN board (EXCEPT E model)  
● A, ● B, ● C, and ● E are supplied as MAIN board (E model)





Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
1	X-4945-616-1	PANEL ASSY. FRONT		* 9	4-971-125-01	PANEL, BACK (AEP)	
* 2	A-4377-258-A	PANEL BOARD, COMPLETE		* 9	4-971-125-11	PANEL, BACK (UK)	
3	1-690-094-11	WIRE, FLAT TYPE (15 CORE)		* 9	4-971-125-22	PANEL, BACK (EE, CIS)	
4	1-590-036-11	WIRE, FLAT TYPE (13 CORE)		* 9	4-971-125-31	PANEL, BACK (E)	
* 5	4-971-122-01	HOLDER, FL TUBE		* 9	4-971-125-41	PANEL, BACK (AUS)	
* 6	4-949-935-01	CUSHION (FL)		* 10	4-949-235-01	HOOK (EXCEPT AUS)	
7	1-575-651-71	CORD, POWER (AEP, EE, CIS)		10	4-956-370-12	BAND, PLUG FIXED (AUS)	
7	1-590-379-11	CORD, POWER (UK)		11	3-363-099-01	SCREW (CASE 3 TP2)	
7	1-775-304-11	CORD, POWER (E)		12	4-969-777-31	CASE	
7	1-775-305-11	CORD, POWER (AUS)		13	4-951-620-01	SCREW (2.6X8), +BVTP	
* 8	3-703-244-00	BUSHING (2104), CORD (EXCEPT E)		FL601	1-517-399-11	INDICATOR TUBE, FLUORESCENT	
8	3-703-571-11	BUSHING (S) (4516), CORD (E)					

### 3-2. MAIN BOARD SECTION

NOTE: ● A, ● B, ● C, and ● D are supplied as MAIN board (EXCEPT E model)  
● A, ● B, ● C, and ● E are supplied as MAIN board (E model)







The components identified by mark  or dotted line with mark  are critical for safety.  
Replace only with part number specified.

Ref. No.	Part No.	Description
* 51	A-4377-257-A	MAIN BOARD, COMPLETE (AEP, UK, EE, CIS)
* 51	A-4378-424-A	MAIN BOARD, COMPLETE (E)
* 51	A-4378-425-A	MAIN BOARD, COMPLETE (AUS)
* 52	1-655-017-11	VIDEO BOARD
* 53	A-4377-259-A	INPUT BOARD, COMPLETE
54	4-812-134-00	RIVET NYLON, 3.5
55	X-4941-228-1	FOOT ASSY
56	1-533 217 31	HOLDER, FUSE

Remark

Ref. No. Part No. Description

Remark

	F1	1-532-203-00	FUSE (T2.0A 250V)
	F2	1-532-203-00	FUSE (T2.0A 250V)
	IC201	8-759-502-32	IC S1-18752N
	IC251	8-759-502-32	IC S1-18752N
	IC501	8-759-502-32	IC S1-18752N
	T901	1-427-781-11	TRANSFORMER, POWER (AEP, UK, EE, CIS)
	T901	1-429-099-11	TRANSFORMER, POWER (E, AUS)

## SECTION 4 ELECTRICAL PARTS LIST

INPUT

MAIN

### NOTE:

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- RESISTORS  
All resistors are in ohms  
METAL: Metal-film resistor  
METAL OXIDE: Metal Oxide-film resistor  
F: nonflammable

- SEMICONDUCTORS  
In each case,  $\mu$ :  $\mu$ , for example:  
 $\mu A...$ :  $\mu A...$ ,  $\mu PA...$ :  $\mu PA...$ ,  $\mu PB...$ :  $\mu PB...$ ,  
 $\mu PC...$ :  $\mu PC...$ ,  $\mu PD...$ :  $\mu PD...$
- CAPACITORS  
 $\mu F$ :  $\mu F$
- COILS  
 $\mu H$ :  $\mu H$
- Abbreviation  
EE: East European model  
AUS: Australian model

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*	A-4377-259-A	INPUT BOARD, COMPLETE *****		R103	1-249-417-11	CARBON 1K 5% 1/4W F	
		< CAPACITOR >		R104	1-249-441-11	CARBON 100K 5% 1/4W	
C101	1-162-286-31	CERAMIC 220PF 10% 50V		R105	1-249-417-11	CARBON 1K 5% 1/4W	
C102	1-162-286-31	CERAMIC 220PF 10% 50V		R106	1-249-413-11	CARBON 470 5% 1/4W F	
C103	1-162-286-31	CERAMIC 220PF 10% 50V		R107	1-247-903-00	CARBON 1M 5% 1/4W	
C104	1-162-286-31	CERAMIC 220PF 10% 50V		R108	1-249-413-11	CARBON 470 5% 1/4W F	
C111	1-104-664-11	ELECT 47uF 20% 16V		R109	1-247-903-00	CARBON 1M 5% 1/4W	
C112	1-104-664-11	ELECT 47uF 20% 16V		R110	1-249-437-11	CARBON 47K 5% 1/4W	
C113	1-164-159-11	CERAMIC 0.1uF 50V		R111	1-249-413-11	CARBON 470 5% 1/4W F	
C114	1-164-159-11	CERAMIC 0.1uF 50V		R112	1-249-441-11	CARBON 100K 5% 1/4W	
C120	1-124-916-11	ELECT 22uF 20% 63V		R113	1-249-441-11	CARBON 100K 5% 1/4W	
C151	1-162-286-31	CERAMIC 220PF 10% 50V		R115	1-249-413-11	CARBON 470 5% 1/4W F	
C152	1-162-286-31	CERAMIC 220PF 10% 50V		R116	1-249-417-11	CARBON 1K 5% 1/4W F	
C153	1-162-286-31	CERAMIC 220PF 10% 50V		R117	1-249-417-11	CARBON 1K 5% 1/4W F	
C154	1-162-286-31	CERAMIC 220PF 10% 50V		R120	1-249-441-11	CARBON 100K 5% 1/4W	
C171	1-124-916-11	ELECT 22uF 20% 63V		R151	1-249-417-11	CARBON 1K 5% 1/4W F	
		< CONNECTOR >		R152	1-249-441-11	CARBON 100K 5% 1/4W	
* CN101	1-569-504-11	PIN, CONNECTOR 9P		R153	1-249-417-11	CARBON 1K 5% 1/4W F	
		< DIODE >		R154	1-249-441-11	CARBON 100K 5% 1/4W	
D111	8-719-933-33	DIODE HZS6A1L		R155	1-249-417-11	CARBON 1K 5% 1/4W F	
D112	8-719-933-33	DIODE HZS6A1L		R156	1-249-413-11	CARBON 470 5% 1/4W F	
		< IC >		R157	1-247-903-00	CARBON 1M 5% 1/4W	
IC101	8-759-000-48	IC MC14052BCP		R158	1-249-413-11	CARBON 470 5% 1/4W F	
IC102	8-759-000-49	IC MC14066BCP		R159	1-247-903-00	CARBON 1M 5% 1/4W	
IC103	8-759-634-51	IC M5218AP		R160	1-249-437-11	CARBON 47K 5% 1/4W	
		< JACK >		R171	1-249-441-11	CARBON 100K 5% 1/4W	
J101	1-695-188-21	JACK, PIN 4P (VIDEO1 AUDIO)		*****			
J102	1-695-188-21	JACK, PIN 4P (VIDEO2 AUDIO)		*	A-4377-257-A	MAIN BOARD, COMPLETE (AEP, UK, EE, CIS) *****	
		< TRANSISTOR >		*	A-4378-424-A	MAIN BOARD, COMPLETE (E) *****	
Q101	8-729-900-63	TRANSISTOR DTA124ES		*	A-4378-425-A	MAIN BOARD, COMPLETE (AUS) *****	
Q102	8-729-900-63	TRANSISTOR DTA124ES			1-533-217-31	HOLDER, FUSE	
		< RESISTOR >			4-812-134-00	RIVET NYLON, 3.5	
R101	1-249-417-11	CARBON 1K 5% 1/4W F			7-685-645-79	SCREW +BVTP 3X6 TYPE2 N-S	
R102	1-249-441-11	CARBON 100K 5% 1/4W			7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
					< CAPACITOR >		
				$\Delta$ C1	1-161-744-51	CERAMIC 0.01uF 400V	

# MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C201	1-124-907-11	ELECT	10uF 20% 50V	C324	1-124-477-11	ELECT	47uF 20% 25V
C202	1-162-282-31	CERAMIC	100PF 10% 50V	C325	1-136-165-00	FILM	0.1uF 5% 50V
C203	1-162-282-31	CERAMIC	100PF 10% 50V	C326	1-136-165-00	FILM	0.1uF 5% 50V
C204	1-126-233-11	ELECT	22uF 20% 50V	C327	1-124-902-00	ELECT	0.47uF 20% 50V
C205	1-136-165-00	FILM	0.1uF 5% 50V	C328	1-126-963-11	ELECT	4.7uF 20% 50V
C206	1-136-165-00	FILM	0.1uF 5% 50V	C329	1-124-902-00	ELECT	0.47uF 20% 50V
C207	1-136-495-11	FILM	0.068uF 5% 50V	C330	1-126-963-11	ELECT	4.7uF 20% 50V
C208	1-136-495-11	FILM	0.068uF 5% 50V	C331	1-136-167-00	FILM	0.15uF 5% 50V
C209	1-136-495-11	FILM	0.068uF 5% 50V	C332	1-126-962-11	ELECT	3.3uF 20% 50V
C210	1-136-495-11	FILM	0.068uF 5% 50V	C333	1-136-167-00	FILM	0.15uF 5% 50V
C215	1-136-153-00	FILM	0.01uF 5% 50V	C334	1-136-157-00	FILM	0.022uF 5% 50V
C251	1-124-907-11	ELECT	10uF 20% 50V	C335	1-136-161-00	FILM	0.047uF 5% 50V
C252	1-162-282-31	CERAMIC	100PF 10% 50V	C336	1-104-666-11	ELECT	220uF 20% 10V
C253	1-162-282-31	CERAMIC	100PF 10% 50V	C337	1-124-907-11	ELECT	10uF 20% 50V
C254	1-126-233-11	ELECT	22uF 20% 50V	C338	1-124-907-11	ELECT	10uF 20% 50V
C255	1-136-165-00	FILM	0.1uF 5% 50V	C339	1-124-907-11	ELECT	10uF 20% 50V
C256	1-136-165-00	FILM	0.1uF 5% 50V	C340	1-124-907-11	ELECT	10uF 20% 50V
C257	1-136-495-11	FILM	0.068uF 5% 50V	C341	1-104-666-11	ELECT	220uF 20% 10V
C258	1-136-495-11	FILM	0.068uF 5% 50V	C342	1-126-962-11	ELECT	3.3uF 20% 50V
C259	1-136-495-11	FILM	0.068uF 5% 50V	C343	1-126-962-11	ELECT	3.3uF 20% 50V
C260	1-136-495-11	FILM	0.068uF 5% 50V	C344	1-136-165-00	FILM	0.1uF 5% 50V
C265	1-136-153-00	FILM	0.01uF 5% 50V	C345	1-136-165-00	FILM	0.1uF 5% 50V
C271	1-106-351-00	MYLAR	2200PF 5% 200V	C346	1-124-902-00	ELECT	0.47uF 20% 50V
C271	1-137-366-11	FILM	0.0022uF 5% 50V (E. AUS)	C347	1-126-963-11	ELECT	4.7uF 20% 50V
C272	1-124-907-11	ELECT	10uF 20% 50V	C348	1-124-902-00	ELECT	0.47uF 20% 50V
C273	1-106-351-00	MYLAR	2200PF 5% 200V	C349	1-126-963-11	ELECT	4.7uF 20% 50V
C273	1-137-366-11	FILM	0.0022uF 5% 50V (E. AUS)	C350	1-136-167-00	FILM	0.15uF 5% 50V
C281	1-124-925-11	ELECT	2.2uF 20% 100V	C351	1-126-962-11	ELECT	3.3uF 20% 50V
C282	1-124-907-11	ELECT	10uF 20% 50V	C352	1-136-167-00	FILM	0.15uF 5% 50V
C283	1-124-925-11	ELECT	2.2uF 20% 100V	C353	1-161-494-00	CERAMIC	0.022uF 25V
C285	1-162-217-31	CERAMIC	56PF 5% 50V	C354	1-162-282-31	CERAMIC	100PF 10% 50V
C302	1-104-666-11	ELECT	220uF 20% 10V	C355	1-164-159-11	CERAMIC	0.1uF 50V
C303	1-136-159-00	FILM	0.033uF 5% 50V	C371	1-104-664-11	ELECT	47uF 20% 16V
C304	1-106-347-00	MYLAR	1500PF 5% 200V	C372	1-104-664-11	ELECT	47uF 20% 16V
C305	1-136-159-00	FILM	0.033uF 5% 50V	C373	1-124-925-11	ELECT	2.2uF 20% 100V
C306	1-124-903-11	ELECT	1uF 20% 50V	C374	1-124-925-11	ELECT	2.2uF 20% 100V
C307	1-124-907-11	ELECT	10uF 20% 50V	C375	1-161-494-00	CERAMIC	0.022uF 25V
C308	1-124-907-11	ELECT	10uF 20% 50V	C401	1-104-666-11	ELECT	220uF 20% 10V
C309	1-162-294-31	CERAMIC	0.001uF 10% 50V	C402	1-124-443-00	ELECT	100uF 20% 10V
C310	1-126-963-11	ELECT	4.7uF 20% 50V	C501	1-124-907-11	ELECT	10uF 20% 50V
C311	1-124-925-11	ELECT	2.2uF 20% 100V	C502	1-162-282-31	CERAMIC	100PF 10% 50V
C312	1-162-596-11	CERAMIC	0.022uF 30% 25V	C503	1-162-282-31	CERAMIC	100PF 10% 50V
C313	1-164-159-11	CERAMIC	0.1uF 50V	C504	1-126-233-11	ELECT	22uF 20% 50V
C314	1-104-666-11	ELECT	220uF 20% 10V	C505	1-136-165-00	FILM	0.1uF 5% 50V
C316	1-124-907-11	ELECT	10uF 20% 50V	C506	1-136-165-00	FILM	0.1uF 5% 50V
C317	1-124-443-00	ELECT	100uF 20% 10V	C507	1-136-495-11	FILM	0.068uF 5% 50V
C318	1-162-292-31	CERAMIC	680PF 10% 50V	C508	1-136-495-11	FILM	0.068uF 5% 50V
C322	1-126-963-11	ELECT	4.7uF 20% 50V	C510	1-136-153-00	FILM	0.01uF 5% 50V
C323	1-136-173-00	FILM	0.47uF 5% 50V	C511	1-136-495-11	FILM	0.068uF 5% 50V
				C512	1-136-495-11	FILM	0.068uF 5% 50V



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C513	1-162-286-31	CERAMIC 220PF 10% 50V		D706	8-719-024-99	DIODE 11ES2-NTA2B	
C572	1-124-907-11	ELECT 10uF 20% 50V		D707	8-719-024-99	DIODE 11ES2-NTA2B	
C581	1-124-925-11	ELECT 2.2uF 20% 100V		D708	8-719-024-99	DIODE 11ES2-NTA2B	
C582	1-124-907-11	ELECT 10uF 20% 50V		D709	8-719-987-63	DIODE 1N4148M	
C583	1-124-925-11	ELECT 2.2uF 20% 100V		D710	8-719-987-63	DIODE 1N4148M	
C585	1-162-207-31	CERAMIC 22PF 5% 50V		D711	8-719-024-99	DIODE 11ES2-NTA2B	
C701	1-126-413-11	ELECT 3300uF 20% 35V		D712	8-719-024-99	DIODE 11ES2-NTA2B	
C702	1-126-413-11	ELECT 3300uF 20% 35V		D713	8-719-934-18	DIODE HZS27-2L	
C705	1-124-563-11	ELECT 2200uF 20% 25V		D714	8-719-014-66	DIODE UZP-5.6B	
C706	1-124-563-11	ELECT 2200uF 20% 25V		D715	8-719-987-63	DIODE 1N4148M	
C707	1-124-907-11	ELECT 10uF 20% 50V		< GROUND TERMINAL >			
C708	1-124-907-11	ELECT 10uF 20% 50V		EB1	1-537-770-11	TERMINAL BOARD, GROUND	
C709	1-126-941-11	ELECT 470uF 20% 16V		EB2	1-537-770-11	TERMINAL BOARD, GROUND	
C710	1-126-941-11	ELECT 470uF 20% 16V		< FUSE >			
C711	1-124-925-11	ELECT 2.2uF 20% 100V		△F1	1-532-203-00	FUSE (T2.0A 250V)	
C712	1-124-557-11	ELECT 1000uF 20% 25V		△F2	1-532-203-00	FUSE (T2.0A 250V)	
C713	1-124-907-11	ELECT 10uF 20% 50V		< COIL >			
C714	1-124-463-00	ELECT 0.1uF 20% 50V		FB1	1-412-473-21	INDUCTOR 0uH	
C715	1-164-159-11	CERAMIC 0.1uF 50V		FB2	1-412-473-21	INDUCTOR 0uH	
C716	1-124-443-00	ELECT 100uF 20% 10V		< IC >			
C720	1-126-967-11	ELECT 47uF 20% 35V		IC201	8-759-502-32	IC SI-18752N	
C721	1-124-910-11	ELECT 47uF 20% 50V		IC251	8-759-502-32	IC SI-18752N	
C722	1-124-907-11	ELECT 10uF 20% 50V		IC281	8-759-634-51	IC M5218AP	
C723	1-124-910-11	ELECT 47uF 20% 50V		IC300	8-759-168-98	IC LV1010N	
C724	1-124-478-11	ELECT 100uF 20% 25V		IC301	8-759-248-74	IC LA2785	
C751	1-136-165-00	FILM 0.1uF 5% 50V		IC302	8-759-281-42	IC TC9210P	
C752	1-136-165-00	FILM 0.1uF 5% 50V		IC303	8-759-000-48	IC MC14052BCP	
C755	1-161-377-00	CERAMIC 0.0047uF 30% 50V		IC304	8-759-634-51	IC M5218AP	
C756	1-161-377-00	CERAMIC 0.0047uF 30% 50V		IC401	8-759-111-68	IC uPC1237HA	
< CONNECTOR >				IC501	8-759-502-32	IC SI-18752N	
CN1	1-580-230-11	PIN, CONNECTOR (PC BOARD) 2P		IC581	8-759-634-51	IC M5218AP	
CN102	1-770-249-41	HOUSING, CONNECTOR (PC BOARD) 9P	(SYSTEM CONTROL 3)	IC701	8-759-701-59	IC NJM78M09FA	
CN103	1-764-016-21	HOUSING, CONNECTOR (PC BOARD) 5P	(SYSTEM CONTROL 4)	IC702	8-759-604-49	IC M5F7909L	
* CN104	1-569-495-11	SOCKET, CONNECTOR 9P		IC703	8-759-820-13	IC L78MR06	
* CN105	1-569-491-11	SOCKET, CONNECTOR 5P		< JACK >			
* CN106	1-568-832-11	SOCKET, CONNECTOR 13P		J103	1-770-157-11	JACK, PIN 2P (CENTER OUT)	
* CN107	1-568-834-11	SOCKET, CONNECTOR 15P		< COIL >			
< DIODE >				L201	1-420-872-00	COIL, AIR-CORE 1.9uH	
D1	8-719-815-85	DIODE 1S1585		L251	1-420-872-00	COIL, AIR-CORE 1.9uH	
D371	8-719-933-33	DIODE HZS6A1L		L301	1-410-509-11	INDUCTOR 10uH	
D372	8-719-933-33	DIODE HZS6A1L		L302	1-410-509-11	INDUCTOR 10uH	
D401	8-719-815-85	DIODE 1S1585		L501	1-420-872-00	COIL, AIR-CORE 1.9uH	
D402	8-719-815-85	DIODE 1S1585					
D701	8-719-028-23	DIODE D3SBA20-4101					
D703	8-719-024-99	DIODE 11ES2-NTA2B					
D704	8-719-024-99	DIODE 11ES2-NTA2B					
D705	8-719-024-99	DIODE 11ES2-NTA2B					

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

# MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
< IC LINK >							
△PS701	1-532-844-21	LINK, IC 3.15A		R300	1-247-903-00	CARBON	1M 5% 1/4W
△PS702	1-532-844-21	LINK, IC 3.15A		R301	1-249-411-11	CARBON	330 5% 1/4W
< TRANSISTOR >				R302	1-249-432-11	CARBON	18K 5% 1/4W
Q281	8-729-422-57	TRANSISTOR UN4111		R303	1-249-417-11	CARBON	1K 5% 1/4W F
Q282	8-729-119-78	TRANSISTOR 2SC2785-HFE		R304	1-249-417-11	CARBON	1K 5% 1/4W F
Q301	8-729-422-57	TRANSISTOR UN4111		R306	1-249-436-11	CARBON	39K 5% 1/4W
Q302	8-729-119-78	TRANSISTOR 2SC2785-HFE		R308	1-249-417-11	CARBON	1K 5% 1/4W F
Q303	8-729-119-78	TRANSISTOR 2SC2785-HFE		R309	1-249-417-11	CARBON	1K 5% 1/4W F
Q401	8-729-119-76	TRANSISTOR 2SA1175-HFE		R310	1-249-417-11	CARBON	1K 5% 1/4W F
Q402	8-729-119-78	TRANSISTOR 2SC2785-HFE		R313	1-249-437-11	CARBON	47K 5% 1/4W
Q403	8-729-119-78	TRANSISTOR 2SC2785-HFE		R314	1-249-417-11	CARBON	1K 5% 1/4W F
Q581	8-729-422-57	TRANSISTOR UN4111		R315	1-249-417-11	CARBON	1K 5% 1/4W F
Q582	8-729-119-78	TRANSISTOR 2SC2785-HFE		R316	1-249-417-11	CARBON	1K 5% 1/4W F
Q701	8-729-140-04	TRANSISTOR 2SB1116A-L		R317	1-249-437-11	CARBON	47K 5% 1/4W
< RESISTOR >				R321	1-249-423-11	CARBON	3.3K 5% 1/4W F
R201	1-249-417-11	CARBON	1K 5% 1/4W F	R322	1-247-864-11	CARBON	24K 5% 1/4W
R202	1-249-433-11	CARBON	22K 5% 1/4W	R323	1-249-423-11	CARBON	3.3K 5% 1/4W F
R203	1-249-417-11	CARBON	1K 5% 1/4W F	R324	1-247-864-11	CARBON	24K 5% 1/4W
R204	1-249-433-11	CARBON	22K 5% 1/4W	R325	1-249-401-11	CARBON	47 5% 1/4W F
R205	1-249-393-11	CARBON	10 5% 1/4W F	R361	1-249-423-11	CARBON	3.3K 5% 1/4W F
R206	1-249-438-11	CARBON	56K 5% 1/4W	R362	1-247-864-11	CARBON	24K 5% 1/4W
R207	1-249-393-11	CARBON	10 5% 1/4W F	R363	1-249-423-11	CARBON	3.3K 5% 1/4W F
R208	1-249-393-11	CARBON	10 5% 1/4W F	R364	1-247-864-11	CARBON	24K 5% 1/4W
R251	1-249-417-11	CARBON	1K 5% 1/4W F	R365	1-249-401-11	CARBON	47 5% 1/4W F
R252	1-249-433-11	CARBON	22K 5% 1/4W	R370	1-249-417-11	CARBON	1K 5% 1/4W F
R253	1-249-417-11	CARBON	1K 5% 1/4W F	R371	1-249-413-11	CARBON	470 5% 1/4W F
R254	1-249-433-11	CARBON	22K 5% 1/4W	R372	1-249-413-11	CARBON	470 5% 1/4W F
R255	1-249-393-11	CARBON	10 5% 1/4W F	R373	1-249-441-11	CARBON	100K 5% 1/4W
R256	1-249-437-11	CARBON	47K 5% 1/4W	R374	1-249-427-11	CARBON	6.8K 5% 1/4W F
R257	1-249-393-11	CARBON	10 5% 1/4W F	R375	1-249-427-11	CARBON	6.8K 5% 1/4W F
R258	1-249-393-11	CARBON	10 5% 1/4W F	R376	1-249-441-11	CARBON	100K 5% 1/4W
R271	1-249-429-11	CARBON	10K 5% 1/4W	R377	1-249-417-11	CARBON	1K 5% 1/4W F
R272	1-249-429-11	CARBON	10K 5% 1/4W	R378	1-249-417-11	CARBON	1K 5% 1/4W F
R273	1-249-429-11	CARBON	10K 5% 1/4W	R381	1-249-417-11	CARBON	1K 5% 1/4W F
R274	1-249-429-11	CARBON	10K 5% 1/4W	R382	1-249-417-11	CARBON	1K 5% 1/4W F
R275	1-249-437-11	CARBON	47K 5% 1/4W	R401	1-249-441-11	CARBON	100K 5% 1/4W
R280	1-249-417-11	CARBON	1K 5% 1/4W F	R402	1-249-435-11	CARBON	33K 5% 1/4W
R282	1-249-427-11	CARBON	6.8K 5% 1/4W F	R403	1-249-430-11	CARBON	12K 5% 1/4W
R283	1-249-441-11	CARBON	100K 5% 1/4W	R404	1-249-429-11	CARBON	10K 5% 1/4W
R284	1-249-429-11	CARBON	10K 5% 1/4W	R405	1-249-433-11	CARBON	22K 5% 1/4W
R285	1-249-433-11	CARBON	22K 5% 1/4W	△R406	1-216-453-00	METAL OXIDE	270 5% 2W F
R286	1-249-437-11	CARBON	47K 5% 1/4W	R407	1-249-423-11	CARBON	3.3K 5% 1/4W F
R287	1-249-427-11	CARBON	6.8K 5% 1/4W F	R408	1-249-421-11	CARBON	2.2K 5% 1/4W F
R288	1-249-441-11	CARBON	100K 5% 1/4W	R409	1-249-423-11	CARBON	3.3K 5% 1/4W F
R289	1-249-441-11	CARBON	100K 5% 1/4W	R410	1-249-421-11	CARBON	2.2K 5% 1/4W F
R290	1-249-417-11	CARBON	1K 5% 1/4W F	R411	1-249-417-11	CARBON	1K 5% 1/4W F
				△R412	1-216-453-00	METAL OXIDE	270 5% 2W F
				R501	1-249-417-11	CARBON	1K 5% 1/4W F
				R502	1-249-433-11	CARBON	22K 5% 1/4W
				R503	1-249-417-11	CARBON	1K 5% 1/4W F

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# MAIN PANEL

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R504	1-249-433-11	CARBON	22K 5% 1/4W	*	A-4377-258-A	PANEL BOARD, COMPLETE	
R505	1-249-393-11	CARBON	10 5% 1/4W F			*****	
R506	1-249-435-11	CARBON	33K 5% 1/4W	*	4-949-935-01	CUSHION (FL)	
R507	1-249-393-11	CARBON	10 5% 1/4W F	*	4-971-122-01	HOLDER, FL TUBE	
R508	1-249-393-11	CARBON	10 5% 1/4W F			< CAPACITOR >	
R571	1-249-426-11	CARBON	5.6K 5% 1/4W	C620	1-161-494-00	CERAMIC	0.022uF 25V
R572	1-249-441-11	CARBON	100K 5% 1/4W	C621	1-161-494-00	CERAMIC	0.022uF 25V
R573	1-249-429-11	CARBON	10K 5% 1/4W	C630	1-164-159-11	CERAMIC	0.1uF 50V
R574	1-249-429-11	CARBON	10K 5% 1/4W	C640	1-104-905-11	DOUBLE LAYERS	0.22F 5.5V
R575	1-249-437-11	CARBON	47K 5% 1/4W	C641	1-164-159-11	CERAMIC	0.1uF 50V
R580	1-249-417-11	CARBON	1K 5% 1/4W F	C642	1-124-584-00	ELECT	100uF 20% 10V
R581	1-249-417-11	CARBON	1K 5% 1/4W F	C643	1-104-664-11	ELECT	47uF 20% 10V
R582	1-249-427-11	CARBON	6.8K 5% 1/4W F	C680	1-162-306-11	CERAMIC	0.01uF 30% 16V
R583	1-249-441-11	CARBON	100K 5% 1/4W	C681	1-162-286-31	CERAMIC	220PF 10% 50V
R584	1-249-429-11	CARBON	10K 5% 1/4W			< CONNECTOR >	
R585	1-249-433-11	CARBON	22K 5% 1/4W	* CN601	1-568-834-11	SOCKET, CONNECTOR 15P	
R586	1-249-437-11	CARBON	47K 5% 1/4W	* CN602	1-568-832-11	SOCKET, CONNECTOR 13P	
R587	1-249-427-11	CARBON	6.8K 5% 1/4W F			< DIODE >	
R590	1-249-441-11	CARBON	100K 5% 1/4W	D601	8-719-038-63	DIODE SEL5220S-TH8F (CENTER SPEAKER)	
R591	1-249-441-11	CARBON	100K 5% 1/4W	D602	8-719-038-63	DIODE SEL5220S-TH8F (REAR SPEAKER)	
R701	1-249-431-11	CARBON	15K 5% 1/4W	D611	8-719-987-63	DIODE 1N4148M	
R702	1-249-431-11	CARBON	15K 5% 1/4W	D613	8-719-987-63	DIODE 1N4148M	
R703	1-260-083-11	CARBON	47 5% 1/2W	D640	8-719-987-63	DIODE 1N4148M	
R704	1-249-425-11	CARBON	4.7K 5% 1/4W F	D641	8-719-987-63	DIODE 1N4148M	
R705	1-249-437-11	CARBON	47K 5% 1/4W			< FLUORESCENT INDICATOR >	
R706	1-249-429-11	CARBON	10K 5% 1/4W	FL601	1-517-399-11	INDICATOR TUBE, FLUORESCENT	
		< RELAY >				< IC >	
RY1	1-755-018-11	RELAY		IC601	8-759-343-99	IC TMP87C814N-1147	
RY401	1-515-921-11	RELAY (12V)				< COIL >	
RY402	1-515-921-11	RELAY (12V)		L601	1-410-517-11	INDUCTOR 47uH	
		< TRANSFORMER >		L602	1-410-509-11	MICRO INDUCTOR 10uH	
TI901	1-427-781-11	TRANSFORMER, POWER (AEP, UK, EE, CIS)				< TRANSISTOR >	
TI901	1-429-099-11	TRANSFORMER, POWER (E, AUS)		Q601	8-729-900-63	TRANSISTOR DTA124ES	
		< TERMINAL >		Q602	8-729-900-63	TRANSISTOR DTA124ES	
TM101	1-537-842-11	TERMINAL BOARD (REAR SPEAKER)		Q611	8-729-119-78	TRANSISTOR 2SC2785-HFE	
TM102	1-537-849-11	TERMINAL BOARD (ANTENNA) (2P)		Q612	8-729-119-78	TRANSISTOR 2SC2785-HFE	
		(CENTER SPEAKER)				< RESISTOR >	
		< VOLTAGE SELECTOR >		R601	1-249-409-11	CARBON	220 5% 1/4W F
VS1	1-762-298-11	SW, AC POWER VOLTAGE SELECTOR (E)		R602	1-249-409-11	CARBON	220 5% 1/4W F
		< VIBRATOR >		R603	1-249-417-11	CARBON	1K 5% 1/4W F
X301	1-579-125-11	VIBRATOR, CERAMIC (8MHz)		R604	1-247-807-31	CARBON	100 5% 1/4W
*****							

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# PANEL VIDEO

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R605	1-249-411-11	CARBON	330 5% 1/4W	*****			
R606	1-249-413-11	CARBON	470 5% 1/4W F	*	1-655-017-11	VIDEO BOARD	
R607	1-249-417-11	CARBON	1K 5% 1/4W F	*****			
R608	1-249-417-11	CARBON	1K 5% 1/4W F	< CAPACITOR >			
R609	1-247-807-31	CARBON	100 5% 1/4W	C801	1-124-903-11	ELECT 1uF 20% 50V	
R610	1-249-411-11	CARBON	330 5% 1/4W	C802	1-124-903-11	ELECT 1uF 20% 50V	
R611	1-249-413-11	CARBON	470 5% 1/4W F	C804	1-124-471-00	ELECT 1000uF 20% 6.3V	
R612	1-249-417-11	CARBON	1K 5% 1/4W F	C805	1-124-471-00	ELECT 1000uF 20% 6.3V	
R613	1-249-423-11	CARBON	3.3K 5% 1/4W F	C806	1-124-471-00	ELECT 1000uF 20% 6.3V	
R620	1-249-417-11	CARBON	1K 5% 1/4W F	C807	1-164-159-11	CERAMIC 0.1uF 50V	
R521	1-249-417-11	CARBON	1K 5% 1/4W F	C808	1-126-233-11	ELECT 22uF 20% 50V	
R622	1-249-433-11	CARBON	22K 5% 1/4W	< CONNECTOR >			
R623	1-249-433-11	CARBON	22K 5% 1/4W	* CNJ801	1-569-500-11	PIN, CONNECTOR 5P	
R624	1-249-429-11	CARBON	10K 5% 1/4W	< IC >			
R630	1-249-433-11	CARBON	22K 5% 1/4W	IC801	8-759-061-95	IC SN761200N	
R632	1-249-425-11	CARBON	4.7K 5% 1/4W F	< JACK >			
R633	1-249-429-11	CARBON	10K 5% 1/4W	J801	1-695-317-21	JACK, PIN 2P (VIDEO1 IN/OUT)	
R634	1-249-417-11	CARBON	1K 5% 1/4W F	J802	1-766-748-11	JACK 3P (VIDEO2 IN/OUT, MONITOR OUT)	
R650	1-247-807-31	CARBON	100 5% 1/4W	< COIL >			
R661	1-247-807-31	CARBON	100 5% 1/4W	L801	1-410-521-11	INDUCTOR 100uH	
R662	1-247-807-31	CARBON	100 5% 1/4W	< TRANSISTOR >			
R663	1-247-807-31	CARBON	100 5% 1/4W	Q801	8-729-119-76	TRANSISTOR 2SA1175-HFE	
R664	1-247-807-31	CARBON	100 5% 1/4W	Q802	8-729-119-76	TRANSISTOR 2SA1175-HFE	
R665	1-247-807-31	CARBON	100 5% 1/4W	Q803	8-729-119-76	TRANSISTOR 2SA1175-HFE	
R666	1-247-807-31	CARBON	100 5% 1/4W	< RESISTOR >			
R667	1-247-807-31	CARBON	100 5% 1/4W	R801	1-247-804-11	CARBON 75 5% 1/4W	
R668	1-247-807-31	CARBON	100 5% 1/4W	R802	1-247-804-11	CARBON 75 5% 1/4W	
R669	1-247-807-31	CARBON	100 5% 1/4W	R804	1-249-403-11	CARBON 68 5% 1/4W F	
R670	1-247-807-31	CARBON	100 5% 1/4W	R805	1-249-429-11	CARBON 10K 5% 1/4W	
R671	1-247-807-31	CARBON	100 5% 1/4W	R806	1-249-403-11	CARBON 5% 1/4W F	
R680	1-249-406-11	CARBON	120 5% 1/4W F	R807	1-249-429-11	CARBON 10K 5% 1/4W	
R681	1-247-903-00	CARBON	1M 5% 1/4W	R808	1-249-403-11	CARBON 5% 1/4W F	
R682	1-249-421-11	CARBON	2.2K 5% 1/4W F	R809	1-249-429-11	CARBON 10K 5% 1/4W	
< SWITCH >				R810	1-249-408-11	CARBON 180 5% 1/4W F	
S601	1-554-303-21	SWITCH, TACTILE (VIDEO 1/2)		R811	1-249-408-11	CARBON 180 5% 1/4W F	
S602	1-554-303-21	SWITCH, TACTILE (HALL)		R812	1-249-408-11	CARBON 180 5% 1/4W F	
S603	1-554-303-21	SWITCH, TACTILE (DELAY TIME -)		R813	1-249-408-11	CARBON 180 5% 1/4W F	
S604	1-554-303-21	SWITCH, TACTILE (CENTER LEVEL -)		R814	1-249-408-11	CARBON 180 5% 1/4W F	
S605	1-554-303-21	SWITCH, TACTILE (REAR LEVEL -)		R815	1-249-408-11	CARBON 180 5% 1/4W F	
S606	1-554-303-21	SWITCH, TACTILE (SURROUND OFF)		R817	1-249-417-11	CARBON 1K 5% 1/4W F	
S607	1-554-303-21	SWITCH, TACTILE (DOLBY PRO-LOGIC)		R819	1-249-417-11	CARBON 1K 5% 1/4W F	
S608	1-554-303-21	SWITCH, TACTILE (MODE)					
S609	1-554-303-21	SWITCH, TACTILE (DELAY TIME +)					
S610	1-554-303-21	SWITCH, TACTILE (CENTER LEVEL +)					
S611	1-554-303-21	SWITCH, TACTILE (REAR LEVEL +)					
< VIBRATOR >							
X601	1-579-125-11	VIBRATOR, CERAMIC (8MHz)					

Ref. No.	Part No.	Description	Remark
*****			
		MISCELLANEOUS	
		*****	
4	1-590-036-11	WIRE, FLAT TYPE (13 CORE)	
5	1-690-094-11	WIRE, FLAT TYPE (15 CORE)	
△7	1-575-651-71	CORD, POWER (AEP, EE, CIS)	
△7	1-590-379-11	CORD, POWER (UK)	
△7	1-775-304-11	CORD, POWER (E)	
△7	1-775-305-11	CORD, POWER (AUS)	
△F1	1-532-203-00	FUSE (T2.0A 250V)	
△F2	1-532-203-00	FUSE (T2.0A 250V)	
FL601	1-517-399-11	INDICATOR TUBE, FLUORESCENT	
IC201	8-759-502-32	IC SI-18752N	
IC251	8-759-502-32	IC SI-18752N	
IC501	8-759-502-32	IC SI-18752N	
△T901	1-427-781-11	TRANSFORMER, POWER (AEP, UK, EE, CIS)	
△T901	1-429-099-11	TRANSFORMER, POWER (E, AUS)	
*****			
		ACCESSORIES & PACKING MATERIALS	
		*****	
*	4-973-307-01	CUSHION (UPPER)	
*	4-973-650-01	CUSHION (LOWER)	
*****			
		*****	
		HARDWARE LIST	
		*****	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#2	7-685-645-79	SCREW +BVTP 3X6 TYPE2 N-S	
#3	7-682-560-04	SCREW +BVTT 4X6 (S)	

The components identified by mark  
△ or dotted line with mark △ are  
critical for safety.  
Replace only with part number  
specified.

# TAN-N500/N600

## SERVICE MANUAL

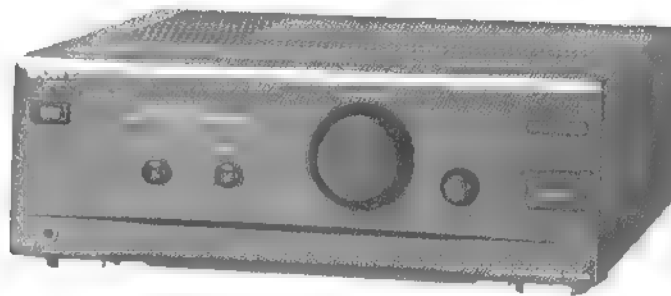


Photo: TAN-N600

TAN-N500/N600 are the Amplifier Section in  
LBT-N500/N550/550K/550P and LBT-N600AV/N650AV.

*AEP Model*  
*UK Model*  
*E Model*  
*Australian Model*  
TAN-N500/N600  
*PX Model*  
TAN-N500

### SPECIFICATIONS

#### DIN power output

40 W + 40 W (6 ohms,  
at 1 kHz)

#### Continuous RMS power output

50 W + 50 W (6 ohms,  
at 1 kHz, 5% THD)

#### Music power output

100 W + 100 W (6 ohms,  
at 1 kHz, 10% THD)

#### Frequency response

15 Hz to 50 kHz  $\pm 3$  dB

#### Power requirements

European models:  
220–230 V AC, 50/60 Hz

Australian model:  
220–240 V AC, 50/60 Hz

Malaysian model:  
220–240 V AC, 50/60 Hz

Mexican model:  
120 V AC, 50/60 Hz

Other models:  
110–120 V or 220–240 V AC  
adjustable, 50/60 Hz

#### Power consumption

European models:  
135 W

Other models:  
195 W

Output	Jack type	Impedance
SURROUND SPEAKER (N500)	–	Accepts speakers up to 16 ohms
PHONES	Stereophone	Accepts headphones of 8 ohms or more

Weight Approx. 5.4 kg

Dimensions  
Approx. 355 x 130 x 335 mm  
(w/h/d, including projections)

Design and specifications are subject to  
change without notice.



STEREO POWER AMPLIFIER  
**SONY®**

## SECTION 1 GENERAL

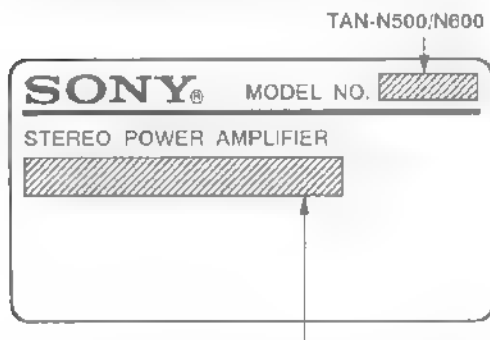
This section is extracted from instruction manual.

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### MODEL IDENTIFICATION

— Specification Label Printed on Back Panel —



AEP, German, Italian, East European,

CIS model : AC: 220 V - 230 V ~50/60 Hz 135 W

UK model : AC: 220 V - 230 V ~50 Hz

Australian,



Malaysia model : AC: 220 V - 240 V ~50/60 Hz 195 W

E. Saudi Arabia, Singapore,

PX model : AC: 110 V - 120 V/220 V - 240 V  
~50/60 Hz 195 W

Mexican model : AC: 120 V ~60 Hz 195 W

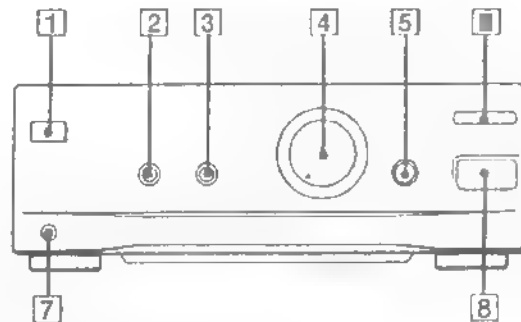
### SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

### 1-1. INDEX TO PARTS AND CONTROLS

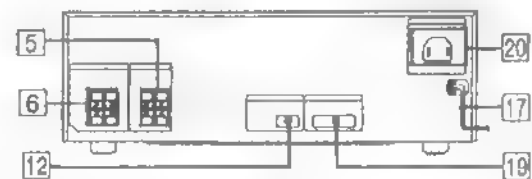
#### Front Panel

#### Power Amplifier (TAN-N500/N600)



- 1 SYSTEM POWER switch
- 2 SURROUND button (N500)
- 2 S-SURROUND button (N600)
- 3 DBFB button
- 4 VOLUME control (N500)
- 4 MASTER VOLUME control (N600)
- 5 BALANCE control
- 6 SLEEP button
- 7 PHONES jack
- 8 FUNCTION button

#### Rear Panel

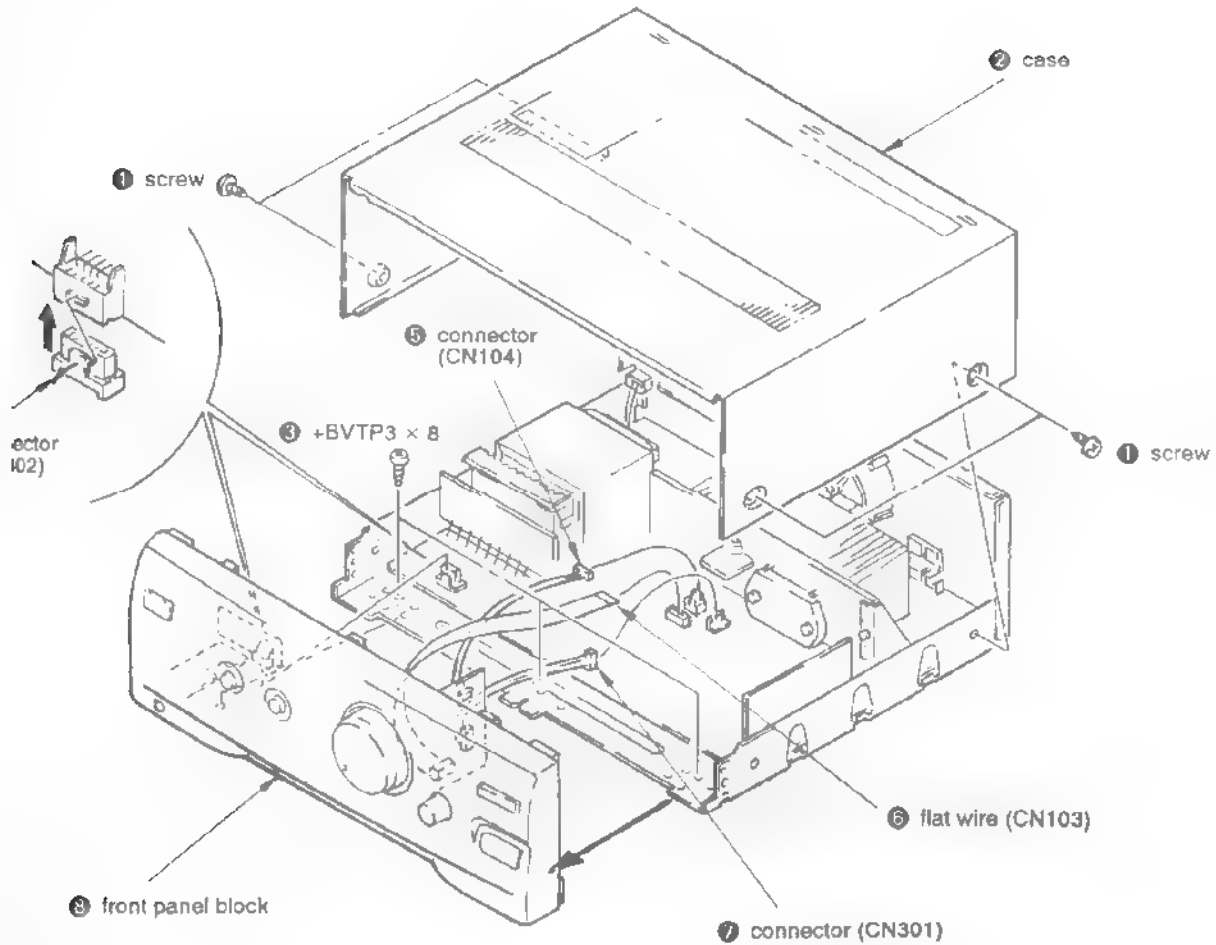


- 5 SPEAKER connectors
- 6 SURROUND SPEAKER connectors (N500)
- 12 SYSTEM CONTROL 4 terminals (N600)
- 17 AC power cord
- 19 SYSTEM CONTROL 2 terminals
- 20 AC OUTLET (N600)

## SECTION 2 DISASSEMBLY

the disassembly procedure in the numerical order given.

### EL ASS'Y

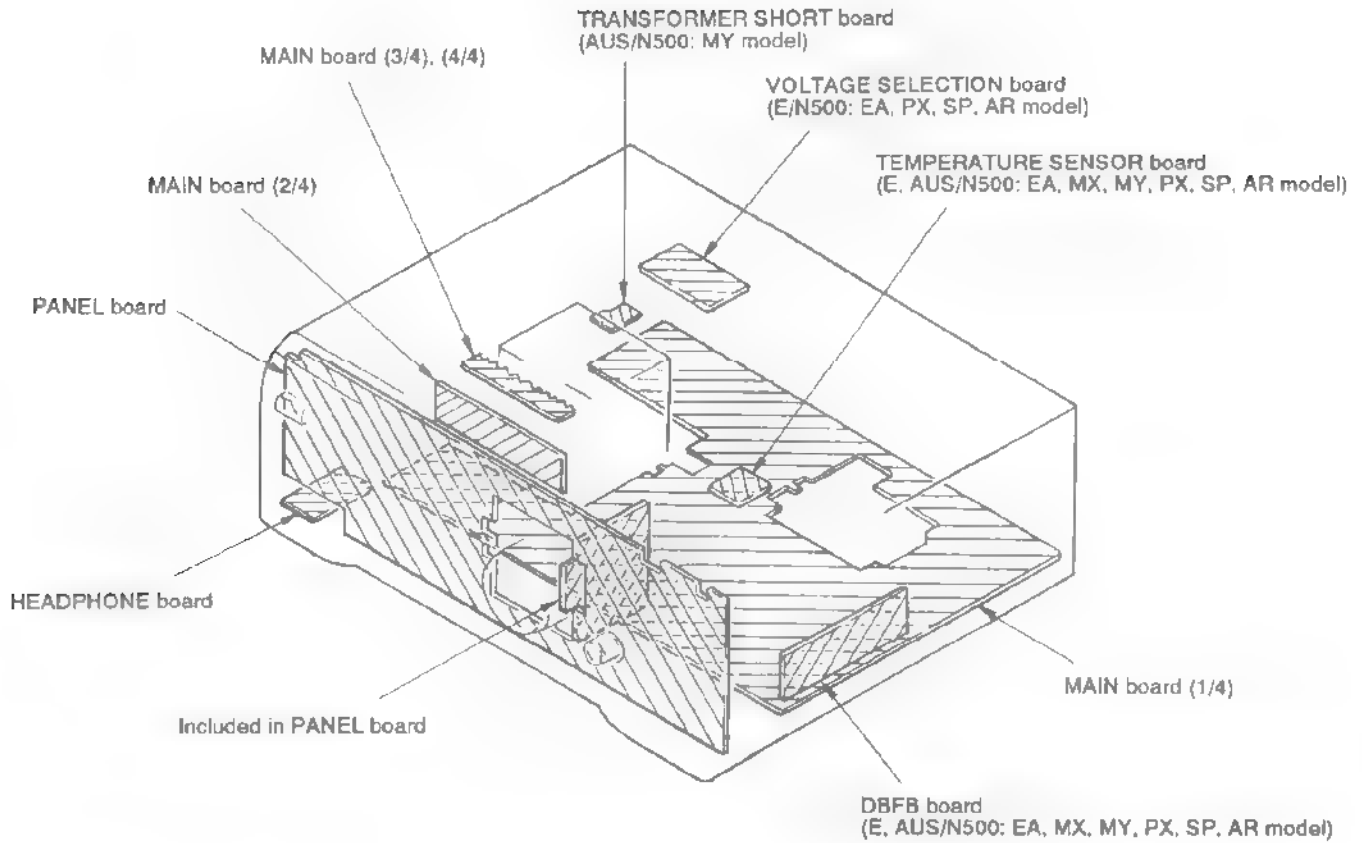




## SECTION 3

### DIAGRAMS

#### 3-1. CIRCUIT BOARDS LOCATION

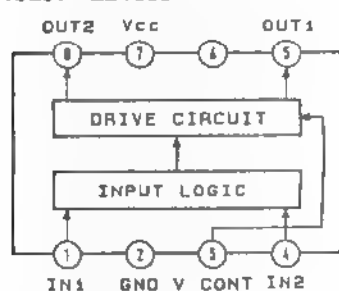
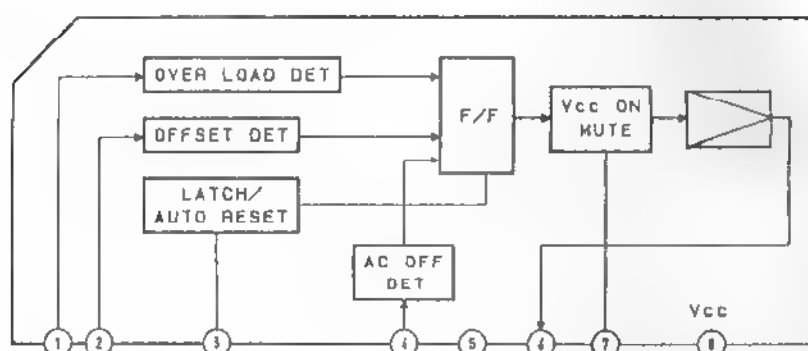


- Abbreviation
  - EA : Saudi Arabia model
  - MX : Mexican model
  - SP : Singapore model
  - MY : Malaysia model
  - AUS : Australian model
  - AR : Argentine model

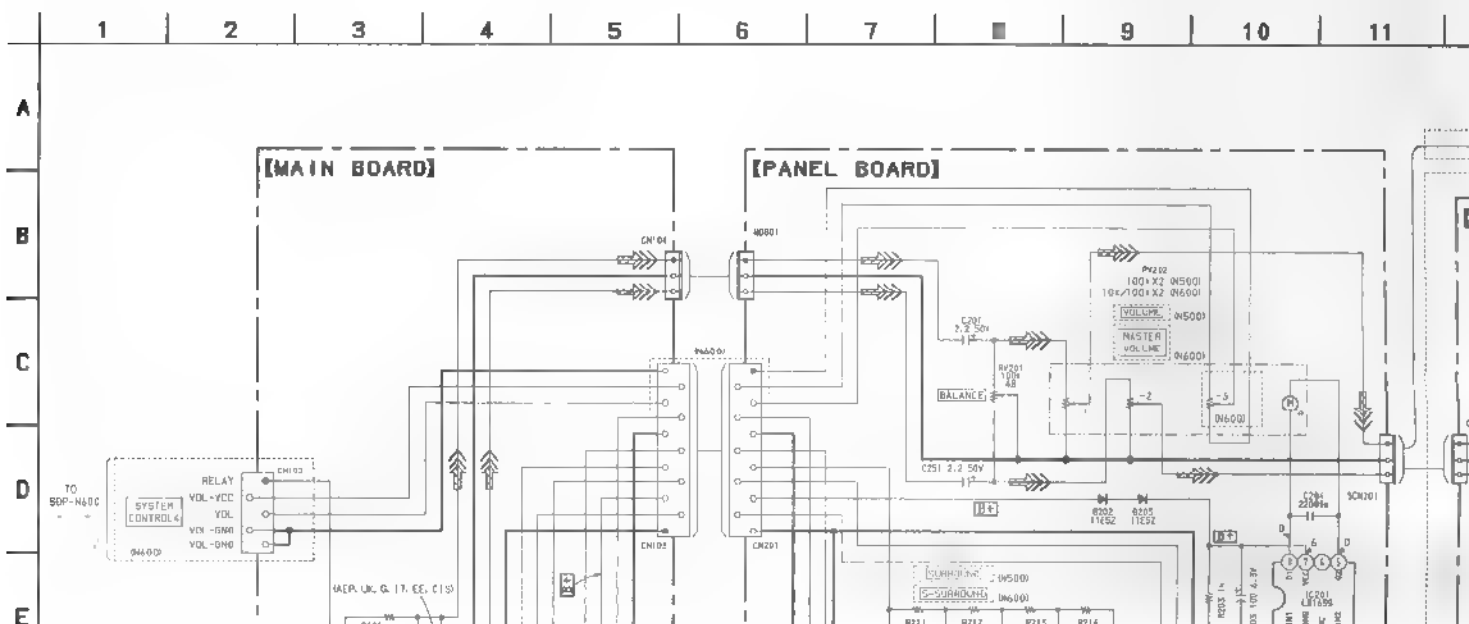
## TAN-N500/N600

- **IC Block Diagrams**

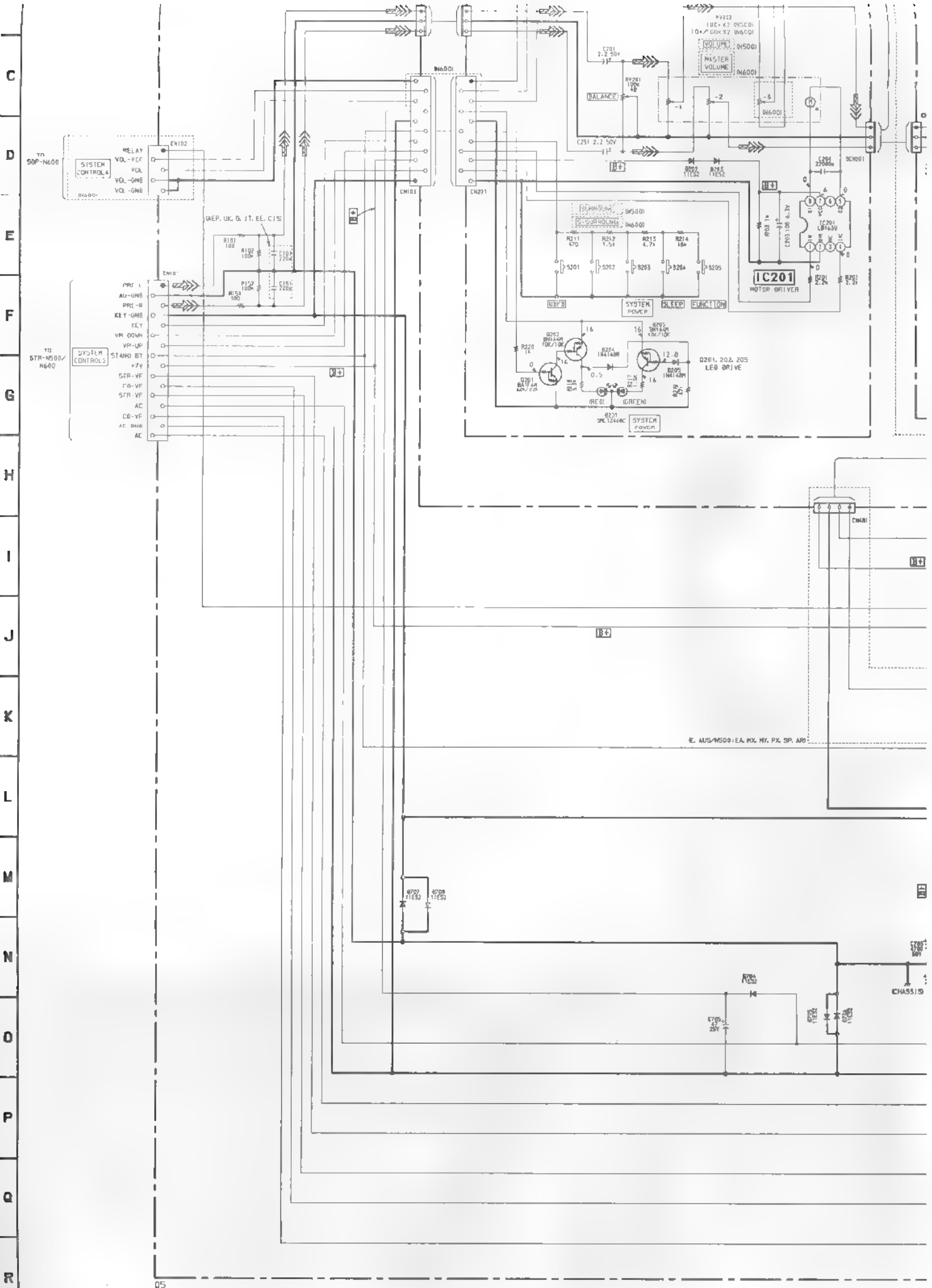
IC201 LB1639

IC501  $\mu$ PC1237HA

### 3-2. SCHEMATIC DIAGRAM



	D	C
	E	
	F	
	G	
	H	
	I	
	J	
	K	
	L	
	M	
	N	
	O	
	P	
	Q	
	R	

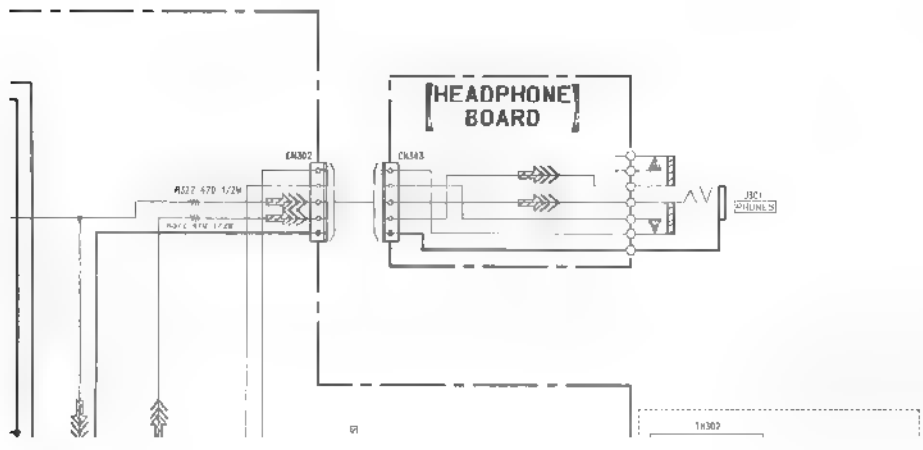






22 23 24 25 26 27 28 29 30 31

A  
B  
C  
D  
E



- Signal path.

### 3-3. PRINTED WIRING BOARDS

#### ● Semiconductor Location

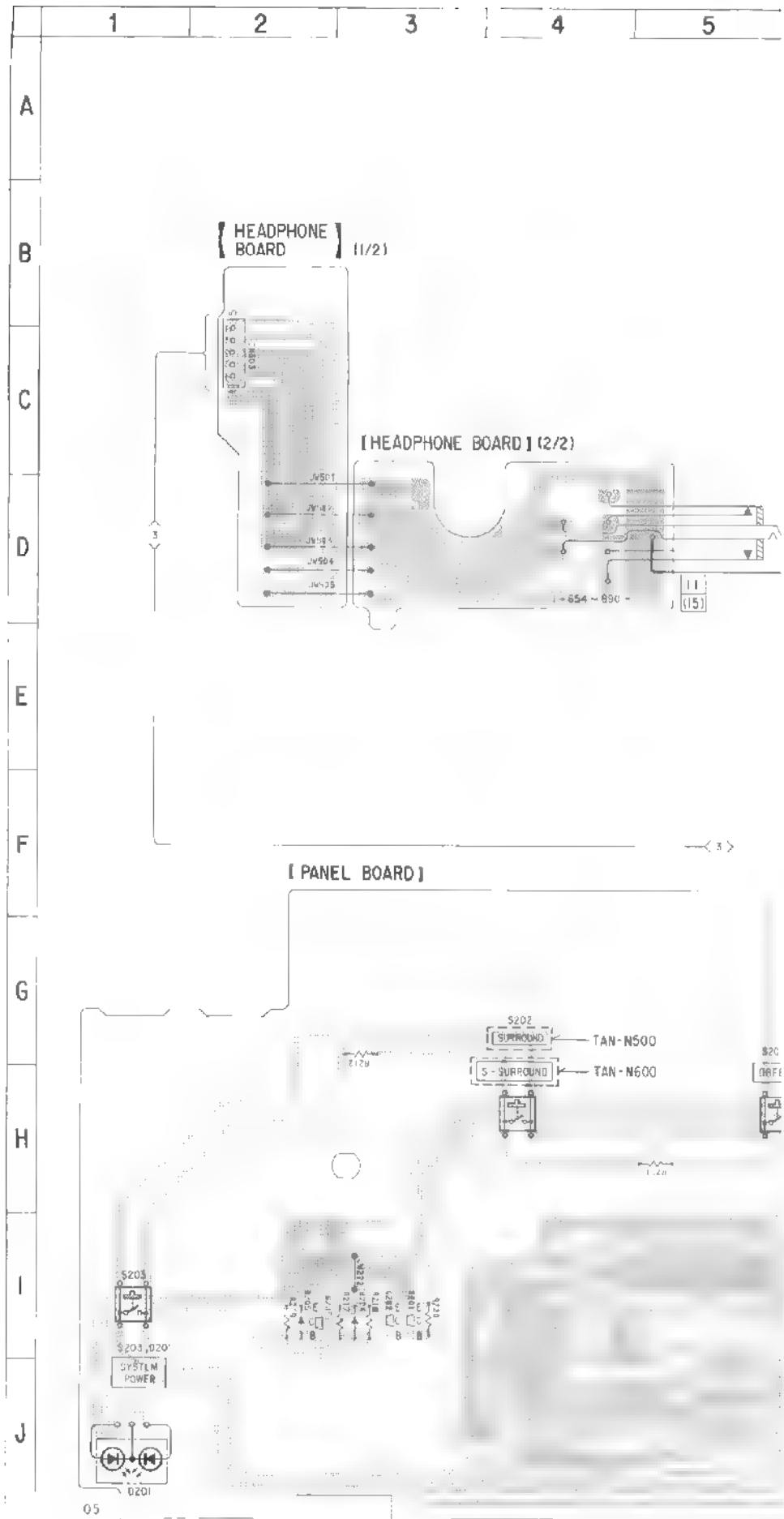
Ref. No.	Location
D201	J-1
D202	H-8
D203	H-8
D204	I-3
D205	I-2
D301	G-20
D303	G-16
△ D304	B-22
D351	G-18
○ D421	C-9
○ D471	C-9
○ D481	H-18
○ D501	H-18
D502	J-16
○ D601	J-19
○ D602	B-22
D701	I-23
D702	J-27
D703	J-27
D704	G-23
D705	G-23
D706	H-23
D707	H-22
D708	G-22
IC201	H-7
IC301	F-19
○ IC401	C-9
IC501	H-16
○ IC601	I-19
○ IC602	D-19
Q201	I-3
Q202	I-3
Q205	I-2
Q301	G-20
Q351	G-17
○ Q401	D-8
○ Q402	D-9
○ Q451	B-8
○ Q452	B-9
Q501	I-17
Q502	I-16
Q503	I-16
Q504	I-16
Q505	I-16
○ Q601	I-20

#### Note:

- : E. AUS/N500: EA, MX, MY, PX, SP, AR MODEL
- △ : N600

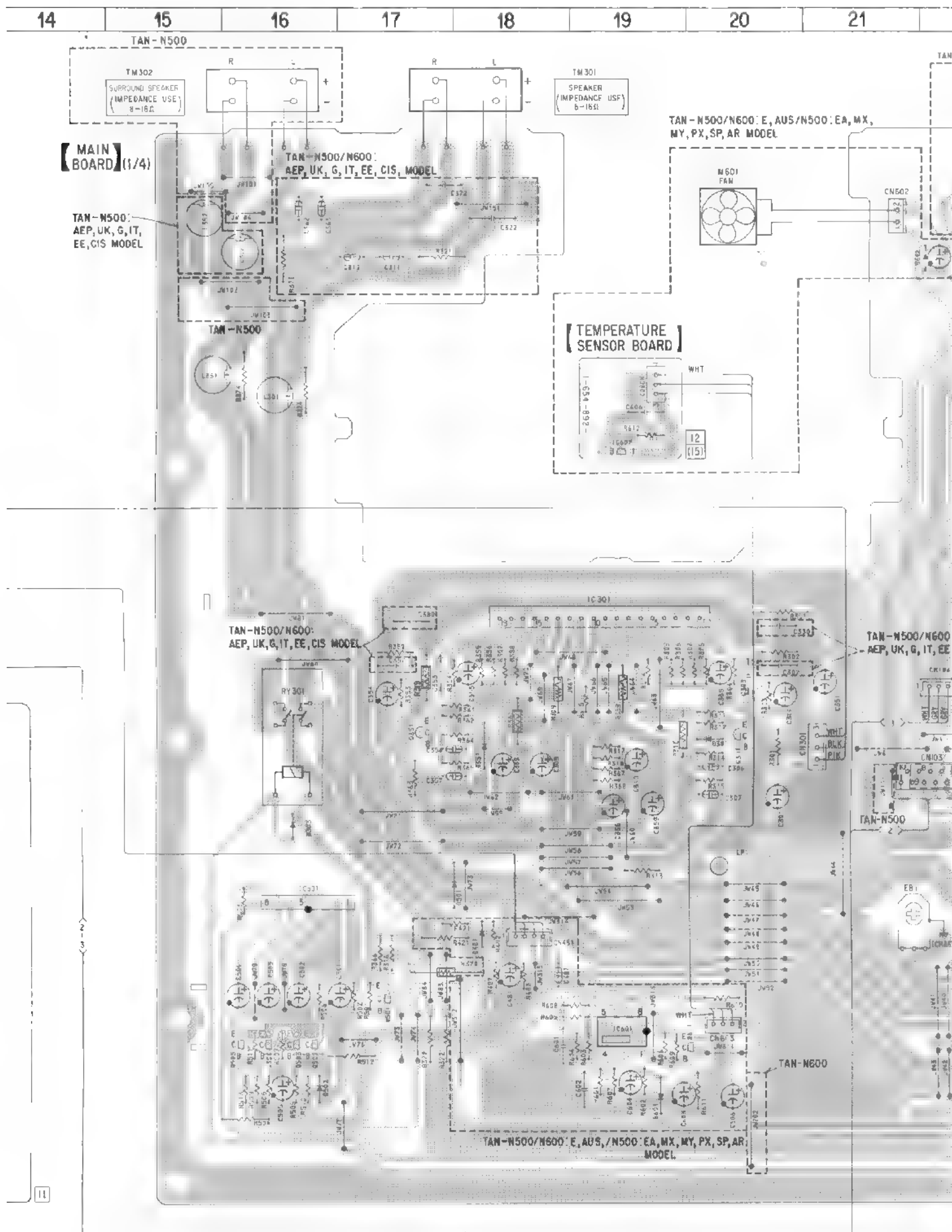
#### Note:

- ○ — : parts extracted from the component side.
- △ : internal component.
- ○ ○ ○ : Pattern from the side which enables seeing.
- Abbreviations
  - : German model
  - IT : Italian model
  - EA : Saudi Arabia model
  - EE : East European model
  - MX : Mexican model
  - SP : Singapore model
  - MY : Malaysia model
  - AUS : Australian model
  - AR : Argentine model







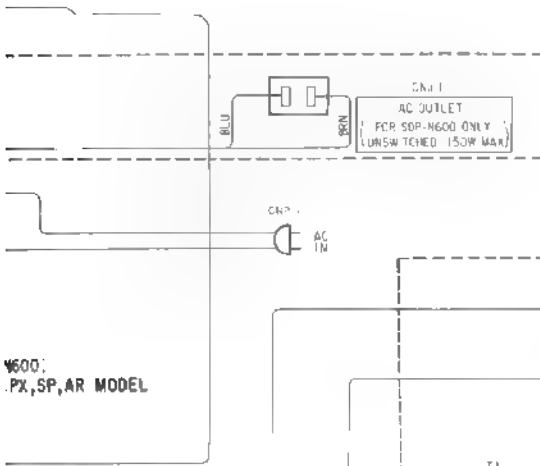
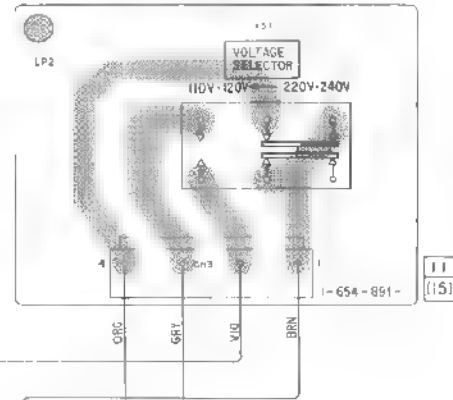




27 28 29 30 31 32 33 34

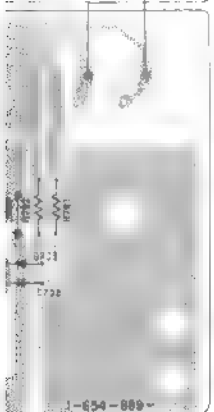
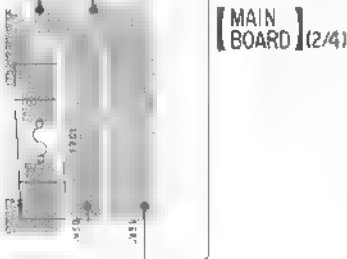
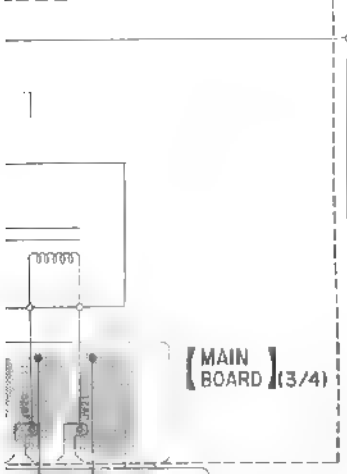
TAN-N500/N600: E/N500: EA, PX, SP, AR MODEL

**[VOLTAGE SELECTOR BOARD]**



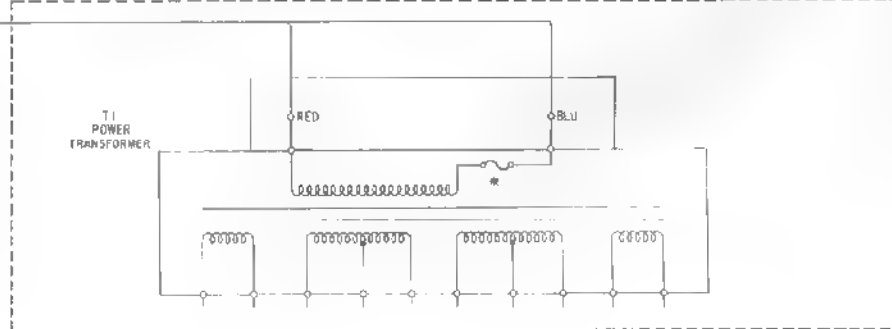
N600:  
PX, SP, AR MODEL

P, UK, G, IT, EE, CIS MODEL



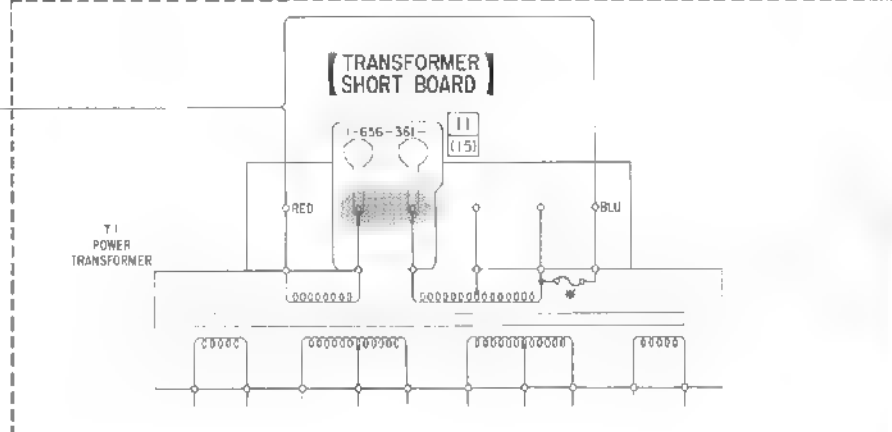
14  
(15)

TAN-N500: MX MODEL



TAN-N500/N600: AUS/N500: MY MODEL

**[TRANSFORMER SHORT BOARD]**



IN: NOT REPLACEABLE BUILT IN TRANSFORMER

## SECTION 4

### EXPLODED VIEWS

#### NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.

- Color Indication of Appearance Parts  
Example:  
KNOB, BALANCE (WHITE) ... (RED)

↑                      ↑  
Part's Color    Cabinet's Color

#### • Abbreviation

O : German model    IT : Italian model  
MX : Mexican model    SP : Singapore model  
AR : Argentine model    E2 : 120 V AC area  
AEP1, G1, IT1, EE1, CIS1 : Model for LBT-N500

- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- The mechanical parts with no reference number in the exploded views are not supplied.

- Hardware (# mark) list and accessories and packing materials are given in the last of the electrical parts list.

The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

EA : Saudi Arabia model

EE : East European model

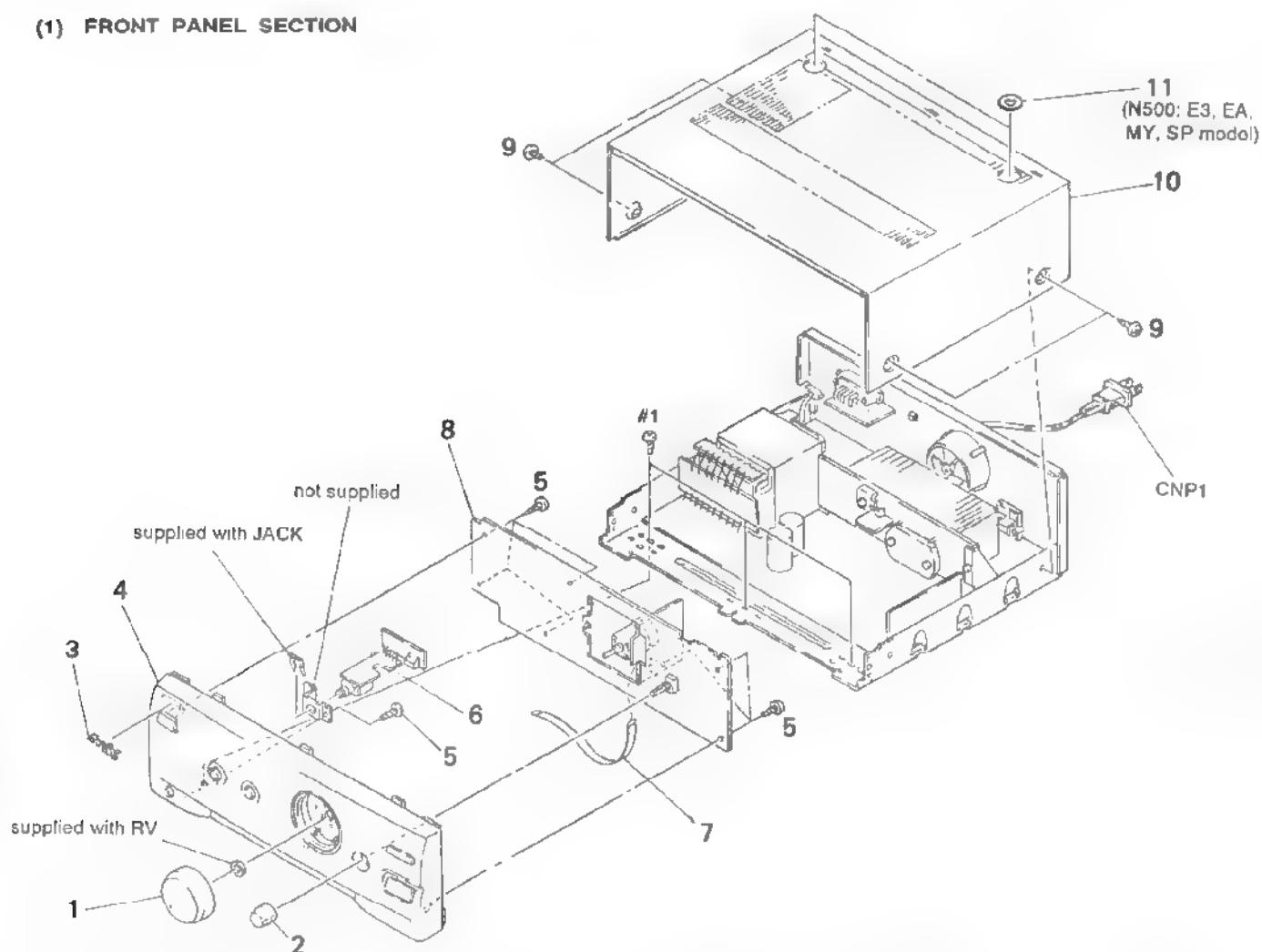
MY : Malaysia model

AUS : Australian model

E3 : 240 V AC area

AEP2, UK2, G2, IT2, CIS2 : Model for LBT-N550

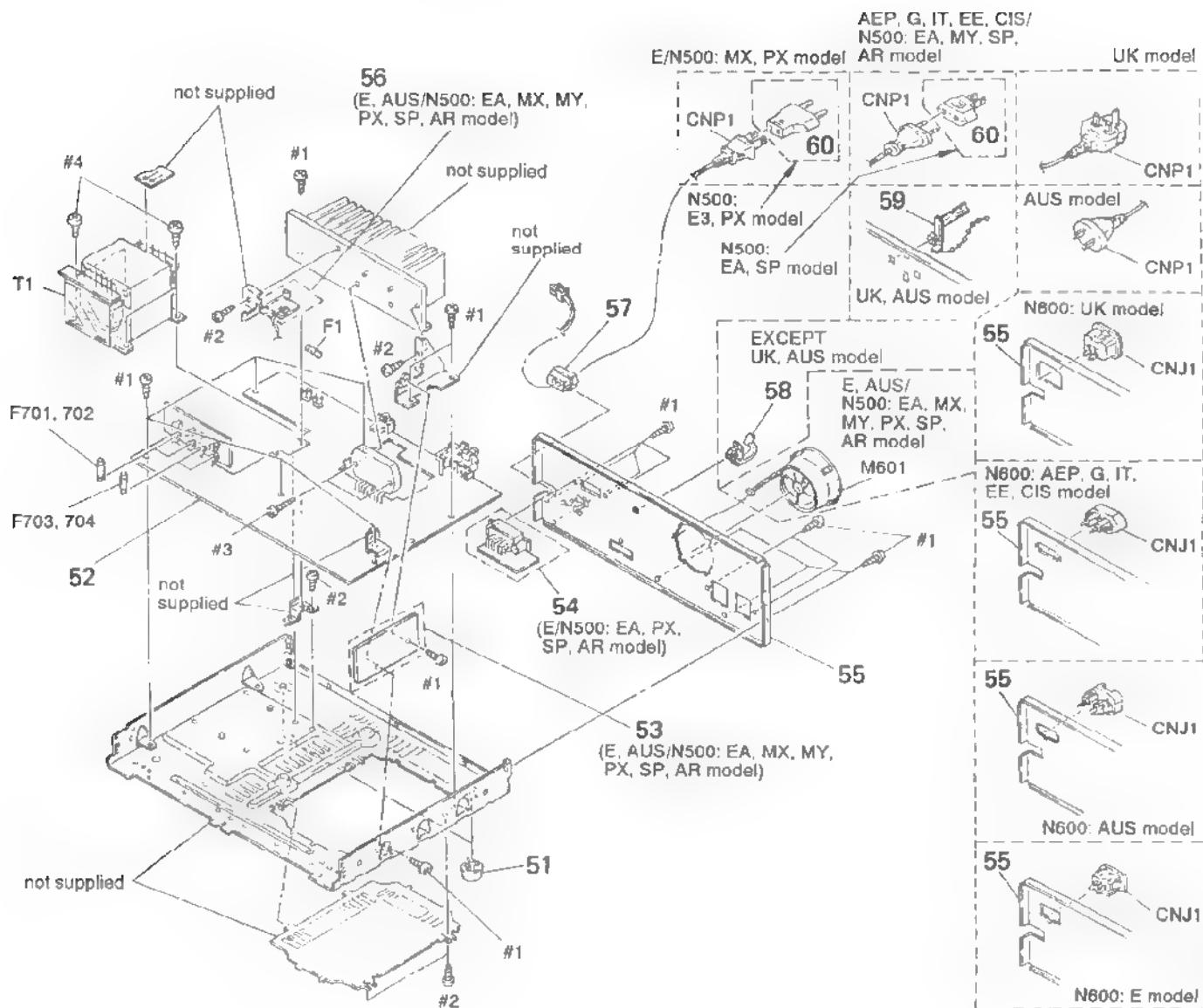
#### (1) FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
1	4 969 683 11	KNOB (V)	
2	4-962-703-22	KNOB (SUR)	
3	4 963 404 21	EMBLEM (5-A), SONY (EXCEPT N600:AUS, E)	
4	X 4945 603 1	PANEL ASSY, FRONT (N500:AEP1, G1, IT1, EE1, CIS1)	
4	X 4945 604 1	PANEL ASSY, FRONT (N500:E2, MX, PX, AR, AUS, AEP2, UK2, G2, IT2, CIS2)	
4	X-4945-605-1	PANEL ASSY, FRONT (N500:E3, EA, MY, SP)	
4	X 4945 606 1	PANEL ASSY, FRONT (N600:AFP, UK, G, IT, EE, CIS)	
4	X-4946-128-1	PANEL ASSY, FRONT (N600:E, AUS)	
5	4-951-620-01	SCREW (2.6X8), +BVTP	

Ref. No.	Part No.	Description	Remark
* 6	1-654-890-11	HEADPHONE BOARD	
7	1-590-218-11	WIRE, FLAT TYPE (11 CORE) (N600)	
* 7	1-590-240 11	WIRE, FLAT TYPE (9 CORE) (N500)	
7	1-590-240-31	WIRE, FLAT TYPE (9 CORE) (N500)	
* 8	A 4377 249 A	PANEL BOARD, COMPLETE (N600)	
* 8	A-4377-273-A	PANEL BOARD, COMPLETE (N500:AEP, UK, G, IT, EE, CIS)	
* 8	A-4377-331-A	PANEL BOARD, COMPLETE (N500:E, EA, MX, MY, PX, SP, AR, AUS)	
9	3 363 099 01	SCREW (CASE 3 TP2)	
10	4-969-778-11	CASE (N600)	
* 10	4-969-778-51	CASE (N500)	
11	4-975-837-01	STOPPER (N500:E3, EA, MY, SP)	

## (2) CHASSIS SECTION



Ref. No.	Part No.	Description	Remark
51	X-4941-228-1	FOOT ASSY	
* 52	A-4377-248-A	MAIN BOARD, COMPLETE (N600:AEP, UK, G, IT, EE, CIS)	
* 52	A-4377-271-A	MAIN BOARD, COMPLETE (N500:AEP, UK, G, IT, EE, CIS)	
* 52	A-4377-274-A	MAIN BOARD, COMPLETE (N500:E, EA, PX, SP, AR)	
* 52	A-4377-816-A	MAIN BOARD, COMPLETE (N500:MX, MY, AUS)	
* 52	A-4378-418-A	MAIN BOARD, COMPLETE (N600:AUS)	
* 52	A-4378-419-A	MAIN BOARD, COMPLETE (N600:E)	
* 53	A-4378-331-A	DBFB BOARD, COMPLETE (E, AUS/N500:EA, MX, MY, PX, SP, AR)	
* 54	1-654-891-11	VOLTAGE SELECTION BOARD (E/N500:EA, PX, SP, AR)	
* 55	4-969-785-01	PANEL, BACK (N500:AEP, IT)	
* 55	4-969-785-11	PANEL, BACK (N500:G)	
* 55	4-969-785-21	PANEL, BACK (N500:UK)	
* 55	4-969-785-31	PANEL, BACK (N500:EE, CIS)	
* 55	4-970-164-01	PANEL, BACK (N500:E, AR)	
* 55	4-970-164-12	PANEL, BACK (N500:MY)	
* 55	4-970-164-21	PANEL, BACK (N500:SP)	
* 55	4-970-164-31	PANEL, BACK (N500:MX)	
* 55	4-970-164-41	PANEL, BACK (N500:AUS)	
* 55	4-970-164-51	PANEL, BACK (N500:EA, PX)	
* 55	4-970-164-61	PANEL, BACK (N600:E)	
* 55	4-970-164-71	PANEL, BACK (N600:AUS)	
* 55	4-971-710-01	PANEL, BACK (N600:AEP, IT)	
* 55	4-971-710-11	PANEL, BACK (N600:G)	
* 55	4-971-710-21	PANEL, BACK (N600:UK)	
* 55	4-971-710-31	PANEL, BACK (N600:EE, CIS)	
* 56	1-654-892-12	TEMPERATURE SENSOR BOARD (E, AUS/N500:EA, MX, MY, PX, SP, AR)	

Ref. No.	Part No.	Description	Remark
* 57	3-733-244-00	BUSHING (2104), CORD (AEP, UK, G, IT, EE, CIS, AUS/N500:EA, MY, SP, AR)	
57	3-733-571-11	BUSHING (S) (4516), CORD (E/N500:MX, PX)	
* 58	4-949-235-01	HOOK (AEP, G, IT, EE, CIS, E/N500:EA, MX, MY, PX, SP, AR)	
59	4-956-370-12	BAND, PLUG FIXED (UK, AUS)	
<u>A</u> 60	1-569-007-11	ADAPTER, CONVERSION 2P (N500:E, PX)	
<u>A</u> 60	1-569-008-11	ADAPTER, CONVERSION 2P (N500:EA, SP)	
<u>A</u> CNJ1	1-526-751-12	OUTLET, AC (N600:UK)	
<u>A</u> CNJ1	1-526-794-11	OUTLET, AC (N600:AEP, G, IT, EE, CIS)	
<u>A</u> CNJ1	1-526-882-00	OUTLET, AC (N600:E)	
<u>A</u> CNJ1	1-540-196-11	OUTLET, AC (N600:AUS)	
<u>A</u> CNP1	1-558-943-41	CORD, POWER (E/N500:MX, PX)	
<u>A</u> CNP1	1-575-651-21	CORD, POWER (AEP, G, IT, EE, CIS/N500:EA, MY, SP, AR)	
<u>A</u> CXPI	1-686-845-11	CORD, POWER (AUS)	
<u>A</u> CXPI	1-751-529-11	CORD, POWER (UK)	
<u>A</u> F1	1-532-286-00	FUSE (T2, 5A 250V) (N600)	
<u>A</u> F701	1-532-299-00	FUSE (T5A 250V) (E, AUS/N500:EA, MX, MY, PX, SP, AR)	
<u>A</u> F701	1-532-350-00	FUSE (T4A 250V) (AEP, UK, G, IT, EE, CIS)	
<u>A</u> F702	1-532-299-00	FUSE (T5A 250V) (E, AUS/N500:EA, MX, MY, PX, SP, AR)	
<u>A</u> F702	1-532-350-00	FUSE (T4A 250V) (AEP, UK, G, IT, EE, CIS)	
<u>A</u> F703	1-532-286-00	FUSE (T2, 5A 250V)	
<u>A</u> F704	1-532-286-00	FUSE (T2, 5A 250V)	
M601	X-4942-329-1	CASE ASSY, FAN (E, AUS/N500:EA, MX, MY, PX, SP, AR)	
<u>A</u> T1	1-427-773-11	TRANSFORMER, POWER (AEP, UK, G, IT, EE, CIS)	
<u>A</u> T1	1-427-774-11	TRANSFORMER, POWER (E, AUS/N500:EA, MY, PX, SP, AR)	
<u>A</u> T1	1-427-997-11	TRANSFORMER, POWER (N500:MX)	

Note: The components identified by mark A or dotted line with mark A are critical for safety.  
Replace only with part number specified.

# SECTION 5

## ELECTRICAL PARTS LIST

## NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.

- XX and -X mean standardized parts, so they may have some difference from the original one.

## RESISTORS

All resistors are in ohms.

METAL: Metal film resistor.

METAL OXIDE: Metal oxide-film resistor.

Flammable

- Abbreviation G : German IT : Italian SP : Singapore MY : Malaysia

- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

## SEMICONDUCTORS

In each case, u:  $\mu$ , for example:

uA :  $\mu$ A. uPA :  $\mu$ PA.

uPB :  $\mu$ PB. uPC :  $\mu$ PC. uPD :  $\mu$ PD.

## CAPACITORS

uF :  $\mu$ F

## COILS

uH :  $\mu$ H

- EA : Saudi Arabia

- AUS : Australian

- EE : East European

- AR : Argentine

- MX : Mexican

- E3 : 240V AC area

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*	A-4378-331-A	DBFB BOARD, COMPLETE (E, AUS/N500:EA, MX, MY, PX, SP, AR)		R406	1-247-903-00	CARBON 1M 5% 1/4W	
		*****		R407	1-249-437-11	CARBON 47K 5% 1/4W	
		CAPACITOR		R408	1-249-437-11	CARBON 47K 5% 1/4W	
C401	1-124-257-00	ELECT 2.2uF 20% 50V		R422	1-260-103-11	CARBON 2.2K 5% 1/2W	
C402	1-136-177-00	FILM 1uF 5% 50V		R423	1-260-103-11	CARBON 2.2K 5% 1/2W	
C403	1-136-177-00	FILM 1uF 5% 50V		R424	1-249-423-11	CARBON 3.3K 5% 1/4W	
C421	1-161-494-00	CERAMIC 0.022uF 25V		R451	1-249-437-11	CARBON 47K 5% 1/4W	
C451	1-124-257-00	ELECT 2.2uF 20% 50V		R452	1-247-807-31	CARBON 100 5% 1/4W	
C452	1-136-177-00	FILM 1uF 5% 50V		R453	1-249-429-11	CARBON 10K 5% 1/4W	
C453	1-136-177-00	FILM 1uF 5% 50V		R454	1-249-407-11	CARBON 150 5% 1/4W	
C471	1-161-494-00	CERAMIC 0.022uF 25V		R455	1-249-417-11	CARBON 1K 5% 1/4W	
		CONNECTOR		R456	1-247-903-00	CARBON 1M 5% 1/4W	
* CN401	1-564-506-11	PLUG, CONNECTOR 3P		R457	1-249-437-11	CARBON 47K 5% 1/4W	
		DIODE		R458	1-249-437-11	CARBON 47K 5% 1/4W	
D421	8-719-000-84	DIODE UZL-7M1		R472	1-260-103-11	CARBON 2.2K 5% 1/2W	
D471	8-719-000-84	DIODE UZL-7M1		R473	1-260-103-11	CARBON 2.2K 5% 1/2W	
		IC		R474	1-249-423-11	CARBON 3.3K 5% 1/4W	
IC401	8-759-634-51	IC M5218AP				*****	
		TRANSISTOR		*	A-4377-248-A	MAIN BOARD, COMPLETE (N600:AEP, UK, G, IT, EE, CIS)	
Q401	8-729-119-78	TRANSISTOR 2SC2785 HFE		*	A-4377-271-A	MAIN BOARD, COMPLETE (N500:AEP, UK, G, IT, EE, CIS)	
Q402	8-729-119-78	TRANSISTOR 2SC2785 HFE		*	A-4377-274-A	MAIN BOARD, COMPLETE (N500:E, EA, PX, SP, AR)	
Q403	8-729-119-78	TRANSISTOR 2SC2785 HFE					
Q451	8-729-119-78	TRANSISTOR 2SC2785 HFE		*	A-4377-816-A	MAIN BOARD, COMPLETE (N600:MX, MY, AUS)	
Q452	8-729-119-78	TRANSISTOR 2SC2785 HFE		*	A-4378-418-A	MAIN BOARD, COMPLETE (N600:AUS)	
Q473	8-729-119-76	TRANSISTOR 2SA1175 HFE		*	A-4378-419-A	MAIN BOARD, COMPLETE (N600:E)	
		RESISTOR				*****	
R401	1-249-437-11	CARBON 47K 5% 1/4W			1-533-217-31	HOLDER, FUSE	
R402	1-247-807-31	CARBON 100 5% 1/4W			1-537-770-11	TERMINAL BOARD, GROUND	
R403	1-249-429-11	CARBON 10K 5% 1/4W				CAPACITOR	
R404	1-249-407-11	CARBON 150 5% 1/4W		C101	1-162-286-31	CERAMIC 220PF 10% 50V (AEP, UK, G, IT, EE, CIS)	
R405	1-249-417-11	CARBON 1K 5% 1/4W		C151	1-162-286-31	CERAMIC 220PF 10% 50V (AEP, UK, G, IT, EE, CIS)	
				C301	1-124-925-11	ELECT 2.2uF 20% 100V	
				C302	1-162-282-31	CERAMIC 100PF 10% 50V (AEP, UK, G, IT, EE, CIS)	



# MAIN

Ref. No.	Part No.	Description	Remark
C303	1-162-286-31	CERAMIC	220PF 10% 50V
C304	1-126-233-11	ELECT	22uF 20% 50V
C305	1-124-910-11	ELECT	47uF 20% 50V
C306	1-137-375-11	FILM	0.068uF 5% 50V
C307	1-137-375-11	FILM	0.068uF 5% 50V
C308	1-124-907-11	ELECT	10uF 20% 50V
C309	1-124-122-11	ELECT	100uF 20% 50V
C310	1-124-907-11	ELECT	10uF 20% 50V
C311	1-137-375-11	FILM	0.068uF 5% 50V (AEP, UK, G, IT, EE, CIS)
C312	1-137-375-11	FILM	0.068uF 5% 50V (AEP, UK, G, IT, EE, CIS)
C322	1-162-306-11	CERAMIC	0.01uF 20% 16V (N500: AEP, UK, G, IT, EE, CIS)
C330	1-162-294-31	CERAMIC	0.001uF 10% 50V (AEP, UK, G, IT, EE, CIS)
C351	1-124-925-11	ELECT	2.2uF 20% 100V
C352	1-162-282-31	CERAMIC	100PF 10% 50V (AEP, UK, G, IT, EE, CIS)
C353	1-162-286-31	CERAMIC	220PF 10% 50V
C354	1-126-233-11	ELECT	22uF 20% 50V
C355	1-124-910-11	ELECT	47uF 20% 50V
C356	1-137-375-11	FILM	0.068uF 5% 50V
C357	1-137-375-11	FILM	0.068uF 5% 50V
C358	1-124-907-11	ELECT	10uF 20% 50V
C359	1-124-122-11	ELECT	100uF 20% 50V
C361	1-137-375-11	FILM	0.068uF 5% 50V (AEP, UK, G, IT, EE, CIS)
C362	1-137-375-11	FILM	0.068uF 5% 50V (AEP, UK, G, IT, EE, CIS)
C372	1-162-306-11	CERAMIC	0.01uF 20% 16V (AEP, UK, G, IT, EE, CIS)
C380	1-161-494-00	CERAMIC	0.022uF 25V (AEP, UK, G, IT, EE, CIS)
C481	1-124-902-03	ELECT	0.47uF 20% 50V (E, AUS/N500: EA, MX, MY, PX, SP, AR)
C482	1-136-173-00	FILM	0.47uF 5% 50V (E, AUS/N500: EA, MX, MY, PX, SP, AR)
C501	1-104-666-11	ELECT	220uF 20% 6.3V
C502	1-104-666-11	ELECT	220uF 20% 6.3V
C503	1-124-925-11	ELECT	2.2uF 20% 100V
C504	1-124-443-00	ELECT	100uF 20% 10V
C505	1-124-910-11	ELECT	47uF 20% 50V

Ref. No.	Part No.	Description	Remark
C506	1-104-664-11	ELECT	47uF 20% 16V
C601	1-164-159-11	CERAMIC	0.1uF 50V (E, AUS/N500: EA, MX, MY, PX, SP, AR)
C602	1-164-159-11	CERAMIC	0.1uF 50V (E, AUS/N500: EA, MX, MY, PX, SP, AR)
C603	1-124-464-11	ELECT	0.22uF 20% 50V (E, AUS/N500: EA, MX, MY, PX, SP, AR)
C604	1-124-464-11	ELECT	0.22uF 20% 50V (E, AUS/N500: EA, MX, MY, PX, SP, AR)
C605	1-124-907-11	ELECT	10uF 20% 50V (E, AUS/N500: EA, MX, MY, PX, SP, AR)
C701	1-136-169-00	FILM	0.22uF 5% 50V
C702	1-136-169-00	FILM	0.22uF 5% 50V
C703	1-126-138-11	ELECT	4700uF 20% 50V
C704	1-126-138-11	ELECT	4700uF 20% 50V
C705	1-124-477-11	ELECT	47uF 20% 25V
C706	1-136-165-00	FILM	0.1uF 5% 50V
C707	1-136-165-00	FILM	0.1uF 5% 50V
C708	1-136-169-00	FILM	0.22uF 5% 50V
C709	1-136-169-00	FILM	0.22uF 5% 50V
< CONNECTOR >			
CN1	1-580-230-11	PIN, CONNECTOR (PC BOARD) 2P	
CN2	1-564-321-00	PIN, CONNECTOR 2P (AEP, UK, G, IT, EE, CIS, AUS, N500: MX, MY)	
* CN2	1-564-687-11	PIN, CONNECTOR 3P (E/N500: EA, PX, SP, AR)	
* CN4	1-564-321-21	PIN, CONNECTOR 2P (N600)	
CN101	1-770-248-31	HOUSING, CONNECTOR (PC BOARD) 16P (SYSTEM CONTROL 2)	
CN102	1-764-016-21	HOUSING, CONNECTOR (PC BOARD) 5P (SYSTEM CONTROL 4) (N600)	
* CN103	1-568-828-11	SOCKET, CONNECTOR 9P (N500)	
* CN103	1-568-830-11	SOCKET, CONNECTOR 11P (N600)	
CN104	1-506-468-11	PIN, CONNECTOR 3P	
CN301	1-564-506-11	PLUG, CONNECTOR 3P	
CN302	1-770-594-21	CONNECTOR, BOARD TO BOARD 5P	
CN481	1-506-469-11	PIN, CONNECTOR 4P (E, AUS/N500: EA, MX, MY, PX, SP, AR)	
CN602	1-564-506-11	PLUG, CONNECTOR 2P (E, AUS/N500: EA, MX, MY, PX, SP, AR)	
CN603	1-506-468-11	PIN, CONNECTOR 3P (E, AUS/N500: EA, MX, MY, PX, SP, AR)	
< DIODE >			
D301	8-719-987-53	DIODE 1N4148M	
D303	8-719-815-85	DIODE 1S1585	
D304	8-719-815-85	DIODE 1S1585 (N600)	
D351	8-719-987-63	DIODE 1N4148M	

# MAIN

Ref. No.	Part No.	Description	Remark
D481	8-719-987-63	DIODE 1N4148M (E, AUS/N500:EA, MX, MY, PX, SP, AR)	
D501	8-719-987-63	DIODE 1N4148M	
D502	8-719-987-63	DIODE 1N4148M	
D601	8-719-987-63	DIODE 1N4148M (E, AUS/N500:EA, MX, MY, PX, SP, AR)	
D602	8-719-987-63	DIODE 1N4148M (E, AUS/N500:EA, MX, MY, PX, SP, AR)	
D701	8-719-028-23	DIODE D3SBA20-4101 (AEP, UK, G, IT, EE, CIS)	
D701	8-719-510-68	DIODE D5SBA20F01 (E, AUS/N500:EA, MX, MY, PX, SP, AR)	
D702	8-719-987-63	DIODE 1N4148M	
D703	8-719-987-63	DIODE 1N4148M	
D704	8-719-024-99	DIODE 11ES2-NTA2B	
D705	8-719-024-99	DIODE 11ES2-NTA2B	
D706	8-719-024-99	DIODE 11ES2-NTA2B	
D707	8-719-024-99	DIODE 11ES2-NTA2B	
D708	8-719-024-99	DIODE 11ES2-NTA2B	
< FUSE >			
△F1	1-532-286-00	FUSE (T2, 5A 250V) (N600)	
△F701	1-532-299-00	FUSE (T5A 250V) (E, AUS/N500:EA, MX, MY, PX, SP, AR)	
△F701	1-532-350-00	FUSE (T4A 250V) (AEP, UK, G, IT, EE, CIS)	
△F702	1-532-299-00	FUSE (T5A 250V) (E, AUS/N500:EA, MX, MY, PX, SP, AR)	
△F702	1-532-350-00	FUSE (T4A 250V) (AEP, UK, G, IT, EE, CIS)	
△F703	1-532-286-00	FUSE (T2, 5A 250V)	
△F704	1-532-286-00	FUSE (T2, 5A 250V)	
< IC >			
IC301	8-749-920-09	IC STK-4152MK2K (AEP, UK, G, IT, EE, CIS)	
IC301	8-749-900-34	IC STK-4182MK2 (E, AUS/N500:EA, MX, MY, PX, SP, AR)	
IC501	8-759-111-68	IC uPC1237HA	
IC601	8-759-103-93	IC uPC393C (E, AUS/N500:EA, MX, MY, PX, SP, AR)	
< COIL >			
L301	1-420-872-00	COIL, AIR-CORE	
L302	1-420-872-00	COIL, AIR-CORE (N500:AEP, UK, G, IT, EE, CIS)	
L351	1-420-872-00	COIL, AIR-CORE	
L352	1-420-872-00	COIL, AIR-CORE (N500:AEP, UK, G, IT, EE, CIS)	
< TRANSISTOR >			
Q301	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q351	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q501	8-729-900-63	TRANSISTOR DTA124ES	

Ref. No.	Part No.	Description	Remark
Q502	8-729-900-36	TRANSISTOR DTC124ES	
Q503	8-729-900-36	TRANSISTOR DTC124ES	
Q504	8-729-900-36	TRANSISTOR DTC124ES	
Q505	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q601	8-729-140-93	TRANSISTOR 2SB733-34 (E, AUS/N500:EA, MX, MY, PX, SP, AR)	
< RESISTOR >			
R101	1-247-807-31	CARBON 100 5% 1/4W	
R102	1-249-441-11	CARBON 100K 5% 1/4W	
R151	1-247-807-31	CARBON 100 5% 1/4W	
R152	1-249-441-11	CARBON 100K 5% 1/4W	
R301	1-249-417-11	CARBON 1K 5% 1/4W	
R302	1-249-438-11	CARBON 56K 5% 1/4W	
R303	1-249-413-11	CARBON 470 5% 1/4W	
R304	1-249-438-11	CARBON 56K 5% 1/4W	
R305	1-249-425-11	CARBON 4.7K 5% 1/4W (AEP, UK, G, IT, EE, CIS)	
R305	1-249-427-11	CARBON 6.8K 5% 1/4W (E, AUS/N500:EA, MX, MY, PX, SP, AR)	
R306	1-249-425-11	CARBON 4.7K 5% 1/4W (AEP, UK, G, IT, EE, CIS)	
R306	1-249-427-11	CARBON 6.8K 5% 1/4W (E, AUS/N500:EA, MX, MY, PX, SP, AR)	
R307	1-249-425-11	CARBON 4.7K 5% 1/4W (AEP, UK, G, IT, EE, CIS)	
R307	1-249-427-11	CARBON 6.8K 5% 1/4W (E, AUS/N500:EA, MX, MY, PX, SP, AR)	
R308	1-249-425-11	CARBON 4.7K 5% 1/4W (AEP, UK, G, IT, EE, CIS)	
R308	1-249-427-11	CARBON 6.8K 5% 1/4W (E, AUS/N500:EA, MX, MY, PX, SP, AR)	
△R309	1-212-881-11	FUSIBLE 100 5% 1/4W F	
△R310	1-217-156-00	WIREWOUND 0.22 10% 5W F	
R311	1-249-417-11	CARBON 1K 5% 1/4W	
R312	1-249-431-11	CARBON 15K 5% 1/4W	
R313	1-249-441-11	CARBON 100K 5% 1/4W	
R314	1-249-397-11	CARBON 22 5% 1/4W	
R315	1-249-397-11	CARBON 5% 1/4W	
R316	1-249-438-11	CARBON 56K 5% 1/4W	
R317	1-249-421-11	CARBON 2.2K 5% 1/4W	
R318	1-249-421-11	CARBON 2.2K 5% 1/4W	
△R319	1-249-383-11	CARBON 1.5 5% 1/6W F	
△R320	1-215-890-11	METAL OXIDE 470 5% 2W F (AEP, UK, G, IT, EE, CIS)	
△R320	1-215-891-11	METAL OXIDE 680 5% 2W F (E, AUS/N500:EA, MX, MY, PX, SP, AR)	
R321	1-260-074-11	CARBON 6.8 5% 1/2W (AEP, UK, G, IT, EE, CIS)	

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
R322	1-260-095-11	CARBON	470 5% 1/2W
R324	1-260-076-11	CARBON	10 5% 1/2W
R351	1-249-417-11	CARBON	1K 5% 1/4W
R352	1-249-438-11	CARBON	56K 5% 1/4W
R353	1-249-413-11	CARBON	470 5% 1/4W
R354	1-249-438-11	CARBON	56K 5% 1/4W
R355	1-249-425-11	CARBON	4.7K 5% 1/4W (AEP, UK, G, IT, EE, CIS)
R355	1-249-427-11	CARBON	6.8K 5% 1/4W (E, AUS/N500:EA, MX, MY, PX, SP, AR)
R356	1-249-425-11	CARBON	4.7K 5% 1/4W (AEP, UK, G, IT, EE, CIS)
R356	1-249-427-11	CARBON	6.8K 5% 1/4W (E, AUS/N500:EA, MX, MY, PX, SP, AR)
R357	1-249-425-11	CARBON	4.7K 5% 1/4W (AEP, UK, G, IT, EE, CIS)
R357	1-249-427-11	CARBON	6.8K 5% 1/4W (E, AUS/N500:EA, MX, MY, PX, SP, AR)
R358	1-249-425-11	CARBON	4.7K 5% 1/4W (AEP, UK, G, IT, EE, CIS)
R358	1-249-427-11	CARBON	6.8K 5% 1/4W (E, AUS/N500:EA, MX, MY, PX, SP, AR)
△R359	1-212-881-11	FUSIBLE	100 5% 1/4W F
△R360	1-217-156-00	WIREWOUND	0.22 10% 5W F
R361	1-249-417-11	CARBON	1K 5% 1/4W
R362	1-249-431-11	CARBON	15K 5% 1/4W
R363	1-249-441-11	CARBON	100K 5% 1/4W
R364	1-249-397-11	CARBON	22 5% 1/4W
R365	1-249-397-11	CARBON	22 5% 1/4W
R366	1-249-437-11	CARBON	47K 5% 1/4W
R367	1-249-421-11	CARBON	2.2K 5% 1/4W
R368	1-249-421-11	CARBON	2.2K 5% 1/4W
R371	1-260-074-11	CARBON	5.8 5% 1/2W (AEP, UK, G, IT, EE, CIS)
R372	1-260-095-11	CARBON	470 5% 1/2W
R374	1-260-076-11	CARBON	10 5% 1/2W
R421	1-249-429-11	CARBON	10K 5% 1/4W (E, AUS/N500:EA, MX, MY, PX, SP, AR)
R471	1-249-429-11	CARBON	10K 5% 1/4W (E, AUS/N500:EA, MX, MY, PX, SP, AR)
R481	1-249-411-11	CARBON	330 5% 1/4W (E, AUS/N500:EA, MX, MY, PX, SP, AR)
R482	1-249-417-11	CARBON	1K 5% 1/4W (E, AUS/N500:EA, MX, MY, PX, SP, AR)
R483	1-247-887-00	CARBON	220K 5% 1/4W (E, AUS/N500:EA, MX, MY, PX, SP, AR)
R501	1-249-429-11	CARBON	10K 5% 1/4W
R502	1-249-441-11	CARBON	100K 5% 1/4W
R503	1-249-437-11	CARBON	47K 5% 1/4W

Ref. No.	Part No.	Description	Remark
R504	1-249-430-11	CARBON	12K 5% 1/4W
R505	1-249-441-11	CARBON	100K 5% 1/4W
R506	1-249-411-11	CARBON	330 5% 1/4W
R507	1-249-411-11	CARBON	330 5% 1/4W
R508	1-249-439-11	CARBON	68K 5% 1/4W
R509	1-249-441-11	CARBON	100K 5% 1/4W
R510	1-249-429-11	CARBON	10K 5% 1/4W
R511	1-249-437-11	CARBON	47K 5% 1/4W
R512	1-249-417-11	CARBON	1K 5% 1/4W
R513	1-249-437-11	CARBON	47K 5% 1/4W
R514	1-249-429-11	CARBON	10K 5% 1/4W
R515	1-247-881-00	CARBON	120K 5% 1/4W
R601	1-247-807-31	CARBON	100 5% 1/4W (E, AUS/N500:EA, MX, MY, PX, SP, AR)
R602	1-249-441-11	CARBON	100K 5% 1/4W (E, AUS/N500:EA, MX, MY, PX, SP, AR)
R603	1-249-417-11	CARBON	1K 5% 1/4W (E, AUS/N500:EA, MX, MY, PX, SP, AR)
R604	1-249-427-11	CARBON	6.8K 5% 1/4W (E, AUS/N500:EA, MX, MY, PX, SP, AR)
R605	1-249-439-11	CARBON	68K 5% 1/4W (E, AUS/N500:EA, MX, MY, PX, SP, AR)
R606	1-249-417-11	CARBON	1K 5% 1/4W (E, AUS/N500:EA, MX, MY, PX, SP, AR)
R607	1-249-417-11	CARBON	1K 5% 1/4W (E, AUS/N500:EA, MX, MY, PX, SP, AR)
R608	1-249-417-11	CARBON	1K 5% 1/4W (E, AUS/N500:EA, MX, MY, PX, SP, AR)
R609	1-249-417-11	CARBON	1K 5% 1/4W (E, AUS/N500:EA, MX, MY, PX, SP, AR)
R610	1-249-396-11	CARBON	18 5% 1/4W (E, AUS/N500:EA, MX, MY, PX, SP, AR)
R611	1-249-389-11	CARBON	4.7 5% 1/4W (E, AUS/N500:EA, MX, MY, PX, SP, AR)
R701	1-249-427-11	CARBON	6.8K 5% 1/4W
R702	1-249-427-11	CARBON	6.8K 5% 1/4W
< RELAY >			
RY301	1-515-920-11	RELAY (24V)	
< TRANSFORMER >			
△T1	1-427-773-11	TRANSFORMER, POWER (AEP, UK, G, IT, EE, CIS)	
△T1	1-427-774-11	TRANSFORMER, POWER (E, AUS/N500:EA, MX, MY, PX, SP, AR)	
△T1	1-427-907-11	TRANSFORMER, POWER (N500:MX)	

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

## MAIN

## PANEL

## HEADPHONE

## TEMPERATURE SENSOR

## VOLTAGE SELECTION

Ref. No.	Part No.	Description	Remark
< TERMINAL >			
TM301	1-537-842-11	TERMINAL BOARD (SPEAKER) (AEP, UK, G, IT, EE, CIS)	
TM301	1-537-240-11	TERMINAL BOARD (CHECKER PIN) (SPEAKER) (E, AUS/N500:EA, MX, MY, PX, SP, AR)	
TM302	1-537-240-11	TERMINAL BOARD (CHECKER PIN) (SURROUND SPEAKER) (N500)	
*****			
*	A-4377-331-A	PANEL BOARD, COMPLETE (N500:E, EA, MX, MY, PX, SP, AR, AUS)	
*	A-4377-273-A	PANEL BOARD, COMPLETE (N500:AEP, UK, G, IT, EE, CIS)	
*	A-4377-249-A	PANEL BOARD, COMPLETE (N600)	
*****			
< CAPACITOR >			
C201	1-124-925-11	ELECT 2.2uF 20% 100V	
C203	1-124-443-00	ELECT 100uF 20% 10V	
C204	1-161-494-00	CERAMIC 0.022uF 25V	
C251	1-124-925-11	ELECT 2.2uF 20% 100V	
< CONNECTOR >			
* CN201	1-568-830-11	SOCKET, CONNECTOR 11P (N600)	
* CN201	1-568-828-11	SOCKET, CONNECTOR 9P (N500)	
< DIODE >			
D201	8-719-045-39	LED SML12450C-TP4 (SYSTEM POWER)	
D202	8-719-024-99	DIODE 11ES2-VTA2B	
D203	8-719-024-99	DIODE 11ES2-VTA2B	
D204	8-719-987-63	DIODE 1N4148M	
D205	8-719-987-63	DIODE 1N4148M	
< IC >			
IC201	8-759-820-62	IC LB1639	
< TRANSISTOR >			
Q201	8-729-900-36	TRANSISTOR DTC124ES	
Q202	8-729-422-57	TRANSISTOR UN4111	
Q205	8-729-422-57	TRANSISTOR UN4111	
< RESISTOR >			
R201	1-249-421-11	CARBON 2.2K 5% 1/4W	
R202	1-249-421-11	CARBON 2.2K 5% 1/4W	
R203	1-249-417-11	CARBON 1K 5% 1/4W	
R211	1-249-413-11	CARBON 470 5% 1/4W	
R212	1-249-419-11	CARBON 1.5K 5% 1/4W	
R213	1-249-425-11	CARBON 4.7K 5% 1/4W	
R214	1-249-432-11	CARBON 18K 5% 1/4W	
R217	1-249-419-11	CARBON 1.5K 5% 1/4W	

Ref. No.	Part No.	Description	Remark
R218	1-249-423-11	CARBON 3.3K 5% 1/4W	
R219	1-249-437-11	CARBON 47K 5% 1/4W	
R220	1-249-417-11	CARBON 1K 5% 1/4W	
< VARIABLE RESISTOR >			
RV201	1-223-847-11	RES. VAR. CARBON 100K (BALANCE)	
RV202	1-223-845-11	RES. VAR. CARBON 10K/100KX2 (MASTER VOLUME) (X600)	
RV202	1-223-844-11	RES. VAR. CARBON 100KX2 (VOLUME) (N500)	
< SWITCH >			
S201	1-554-303-21	SWITCH, TACTILE (DBFB)	
S202	1-554-303-21	SWITCH, TACTILE (SURROUND) (N500)	
S202	1-554-303-21	SWITCH, TACTILE (S-SURROUND) (N600)	
S203	1-554-303-21	SWITCH, TACTILE (SYSTEM POWER)	
S204	1-554-303-21	SWITCH, TACTILE (SLEEP)	
S205	1-554-303-21	SWITCH, TACTILE (FUNCTION)	
*****			
*	1-654-890-11	HEADPHONE BOARD *****	
< CONNECTOR >			
CN303	1-770-593-41	CONNECTOR, BOARD TO BOARD 5P	
< JACK >			
J301	1-580-903-11	JACK, LARGE TYPE (PHONES)	
*****			
*	1-654-892-12	TEMPERATURE SENSOR BOARD (E, AUS/N500:EA, MX, MY, PX, SP, AR) *****	
< CAPACITOR >			
C606	1-164-159-11	CERAMIC 0.1uF 50V	
< IC >			
IC602	8-759-947-34	IC LM350Z	
< RESISTOR >			
R612	1-247-807-31	CARBON 100 5% 1/4W	
*****			
*	1-654-891-11	VOLTAGE SELECTION BOARD (E/N500:EA, PX, SP, AR) *****	
< CAPACITOR >			
CN3	1-568-106-11	PIN, CONNECTOR 4P	

Ref. No.	Part No.	Description	Remark
< VOLTAGE SELECTOR >			
△VS1	1-762-298-11	SW. AC POWER VOLTAGE SELECTOR (VOLTAGE SELECTOR)	
*****			
MISCELLANEOUS			
*****			
7	1-590-218-11	WIRE, FLAT TYPE (11 CORE) (N600)	
* 7	1-590-240-11	WIRE, FLAT TYPE (9 CORE) (N500)	
7	1-590-240-31	WIRE, FLAT TYPE (9 CORE) (N500)	
△60	1-569-007-11	ADAPTER, CONVERSION 2P (N500:E3, PX)	
△60	1-569-008-11	ADAPTER, CONVERSION 2P (N500:EA, SP)	
△CNJ1	1-526-751-12	OUTLET, AC (N600:UK)	
△CNJ1	1-526-794-11	OUTLET, AC (N600:AEP, G, IT, EE, CIS)	
△CNJ1	1-526-882-00	OUTLET, AC (N600:E)	
△CNJ1	1-540-196-11	OUTLET, AC (N600:AUS)	
△CNP1	1-558-943-41	CORD, POWER (E/N500:MX, PX)	
△CNP1	1-575-651-21	CORD, POWER (AEP, G, IT, EE, CIS/N500:EA, MY, SP, AR)	
△CNP1	1-696-845-11	CORD, POWER (AUS)	
△CNP1	1-751-529-11	CORD, POWER (UK)	
△F1	1-532-286-00	FUSE (T2.5A 250V) (N600)	
△F701	1-532-299-00	FUSE (T5A 250V) (E, AUS/N500:EA, MX, MY, PX, SP, AR)	
△F701	1-532-350-00	FUSE (T4A 250V) (AEP, UK, G, IT, EE, CIS)	
△F702	1-532-299-00	FUSE (T5A 250V) (E, AUS/N500:EA, MX, MY, PX, SP, AR)	
△F702	1-532-350-00	FUSE (T4A 250V) (AEP, UK, G, IT, EE, CIS)	
△F703	1-532-286-00	FUSE (T2.5A 250V)	
△F704	1-532-286-00	FUSE (T2.5A 250V)	
△T1	1-427-773-11	TRANSFORMER, POWER (AEP, UK, G, IT, EE, CIS)	
△T1	1-427-774-11	TRANSFORMER, POWER (E, AUS/N500:EA, MY, PX, SP, AR)	
△T1	1-427-907-11	TRANSFORMER, POWER (N500:MX)	

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**HARDWARE LIST**  
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#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S
#2	7-685-645-79	SCREW +BVTP 3X6 TYPE2 N-S
#3	7-685-650-79	SCREW +BVTP 3X16 TYPE2 N-S
#4	7-682-560-04	SCREW +BVTT 4X6 (S)

The components identified by  
mark △ or dotted line with mark  
△ are critical for safety.  
Replace only with part number  
specified.